

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. 081TVP01
Application No. A00081

Issue Date: March 5, 2003
Expiration Date: March 31, 2008

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the permittee, **Alyeska Pipeline Service Company**, for the operation of the **Pump Station 12 (PS-12)**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the permittee shall comply with the terms and conditions of this operating permit.

All facility-specific terms and conditions of Air Quality Control Permit-to-Operate 9572-AA003, Air Quality Control Construction Permit No 9872-AC030, and paragraphs relating to PS 12 in the Compliance Order by Consent No. 90-2-4-6-262-1 have been incorporated into this Operating Permit.

This Operating Permit becomes effective April 1, 2003.

John F. Kuterbach, Manager
Air Permits Program

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List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS	Alaska Statutes
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
dscf	Dry standard cubic foot
EEMSP	Excess Emissions and Monitoring Systems Performance
EPA	US Environmental Protection Agency
gr./dscf	grain per dry standard cubic foot (1 pound = 7000 grains)
GPH	gallons per hour
HAPs or HACs	Hazardous Air Pollutants or Hazardous Air Contaminants [<i>HAPs</i> or <i>HACs</i> as defined in AS 46.14.990(14)]
ID	Source Identification Number
kPa	kiloPascals
MACT	Maximum Achievable Control Technology
MR&R	Monitoring, Recordkeeping, and Reporting
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [<i>NESHAPS</i> as defined in 40 C.F.R. 61]
NO _x	Nitrogen Oxides
NSPS	Federal New Source Performance Standards [<i>NSPS</i> as defined in 40 C.F.R. 60]
ppm	Parts per million
PS	Performance specification
PS-12	Pump Station 12
PSD	Prevention of Significant Deterioration
RM	Reference Method
SIC	Standard Industrial Classification
SO ₂	Sulfur dioxide
TAPS	Trans Alaska Pipeline System
TPH	Tons per hour
tpy	Tons per year
VOC	volatile organic compound [<i>VOC</i> as defined in 18 AAC 50.990(103)]
wt%	weight percent

Section 1. Identification

Names and Addresses

Permittee: Alyeska Pipeline Service Company
1835 South Bragaw St.
Anchorage, AK 99512

Facility Name: Trans Alaska Pipeline System's Pump Station 12 (PS-12)

Physical Address: Section 36, T4S, R1E
Near (CRM) Tonsina, Alaska

Owners of the Trans
Alaska Pipeline System
as of permit issue date: Amerada Hess Pipeline Corp.
BP Pipelines (Alaska) Inc.
ExxonMobil Pipeline Company
Phillips Alaska Transportation, Inc.
Unocal Pipeline Company
Williams Alaska Pipeline Company, LLC

Operator: Alyeska Pipeline Service Company

Permittee's Responsible Official
Pipeline Manager Jim F. Johnson. Or, successor

Designated Agent: CT Corporation System
Supervisor of Process/SP
801 West Tenth Street, Suite 300
Juneau, AK 99801
(907) 586-3340

Facility Contact: PS12 Operations and Maintenance Supervisor
(907) 450-5205

Billing Contact: Environment Billing Administrator
P. O. Box 60469, MS 814
Fairbanks, AK 99706

Facility Process Description:

SIC Code of the Facility: 4612 – Crude Oil Pipelines

[18 AAC 50.350(b)(1), 1/18/97]

Section 2. General Emission Information

[18 AAC 50.350(b)(1), 1/18/97]

Emissions of Regulated Air Contaminants, as provided in the permittee's application:

Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Sulfur Dioxide (SO₂), Inhalable Particulates (PM₁₀), Volatile Organic Compounds (VOC), p-Xylenes, 1,3-Butadiene, Acrolein, m-Xylenes, Toluene, Phenol, Xylenes (isomers and mixture), Formaldehyde, 2,2,4-Trimethylpentane, Benzene (including benzene from gasoline), Acetaldehyde, Naphthalene, o-Xylenes, Ethylene glycol, Hexane (as n-Hexane), Polycyclic organic matter, Carbonyl disulfide, Arsenic, Beryllium, Chromium Compounds, Cobalt Compounds. Lead, Mercury, Halon 1301, Reduced sulfur compounds, Hydrogen sulfide, Methanol, Ethylbenzene, Glycol Ethers, Dichlorodifluoromethane (R-21), Chlorodifluoromethane (R-22), Chlorotrifluoromethane and Trifluoromethane azeotropic mixture with approximately 60% Chlorotrifluoromethane (R-503), (Chlorotrifluoromethane) and (Trifluoromethane).

Facility Classifications:

- (1) 18 AAC 50.300(b)(2)
- (2) 18 AAC 50.300(c)(1)

Operating Permit Classifications:

- (1) 18 AAC 50.325(b)(1)
- (2) 18 AAC 50.325(b)(3)

Section 3. Source Listing and Description

Sources listed in Table 1 have source specific monitoring, recordkeeping, or reporting conditions stated elsewhere in this permit. Source descriptions and ratings in Table 1 are for identification purposes only.

Table 1 - Source Inventory

ID	Source Tag No.	Source Description	Fuel	Rating/size	Commence construction¹
1	42-P-2AT	Avon Gas Generator	Distillate Oil	24,600 EGHP	Pre-1977
2	42-P-2BT	Avon Gas Generator	Distillate Oil	24,600 EGHP	Pre-1977
3	42-P-2CT	Avon Gas Generator	Distillate Oil	24,600 EGHP ²	Pre-1977
4	42-G-3AT	Solar Turbine Electric Generator	Distillate Oil	800 kW	Pre 1977
5	42-G-2AT	Garrett Turbine Electric Generator	Distillate Oil	510 kW	Pre-1977
6	42-H-1A	Eclipse Therminol Heater	Distillate Oil	20.6 MMBtu/hr	Pre-1977
7	42-H-1B	Eclipse Therminol Heater	Distillate Oil	20.6 MMBtu/hr	Pre-1977
8	42-PK-11	Therm-Tec Solid Waste Incinerator	Distillate Oil	300 lb/hr	1981

Table Notes

1 Commence construction per 40 CFR 52.21(b) and (i) and 40 CFR 60.2

2 Source ID 3 was commenced construction pre-1977. The mainline turbine position which contains Source ID 3 was modified in 1996 with the installation of rim-cooling on the reaction turbine (Cooper Bessemer) portion of the mainline turbine unit package. At the time of permit issuance Source ID 3 is considered to be subject to 40 CFR 60 Subparts A and GG requirements. The permittee has requested a determination from EPA on whether the addition of rim-cooling constituted a 40 CFR 60.14 modification. Until such time that EPA formally determines that the addition of rim cooling was not a 40 CFR 60.14 modification, the permittee is required to comply with the applicable parts of 40 CFR Subpart A and GG.

Section 4. Fee Requirements

1. Assessable Emissions

The permittee shall pay to the department annual emission fees based on the facility's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The department will assess fees per ton of each air contaminant that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

- 1.1 the facility's assessable potential to emit (PTE) of 2365 tons per year (TPY); or
- 1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the department, when demonstrated by
 - a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - d. other methods and calculations approved by the department.

[18 AAC 50.346(a)(1), 5/3/02 and 18 AAC 50.350(c) & 50.400 – 50.420, 1/18/97]

2. Assessable Emission Estimates.

Emission fees will be assessed as follows:

- 2.1 no later than March 31 of each year, the permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the department can verify the estimates; or
- 2.2 If no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in condition 1.1
- 2.3 The estimate of assessable emissions provided under paragraph 2.1 above may include a gross estimate of emissions for any insignificant sources defined under 18 AAC 50.335(q) through (v) located at the facility. Documentation is not required for subsequent submittals unless requested by the department.

[18 AAC 50.346(a)(1), 5/3/02 and 18 AAC 50.350(c) & 50.400 – 50.420, 1/18/97]

Section 5. Source-Specific Requirements

Fuel-Burning Equipment

3. Visible Emissions.

- 3.1 In accordance with 18 AAC 50.055(a)(1), the permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID(s) 1 – 7 listed in Table 1 to reduce visibility through the exhaust effluent by any of the following:
- a. greater than 20 percent for a total of more than three minutes in any one hour¹;
[18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98]
 - b. more than 20 percent averaged over any six consecutive minutes²
[18 AAC 50.055(a)(1), 5/3/02]
- 3.2 For each of Source ID(s) 1 – 7 that are operated for more than 400 hours per calendar year, the permittee shall monitor, record and report visible emissions in accordance with Section 13.
- 3.3 For Source ID(s) 1-7 record and report under Condition 49, the hours of operation per month and the calendar year-to-date hours for each source.
- 3.4 Report under Condition 47 if the visible-emission standard in Condition 3.1 is exceeded.
[18 AAC 50.350(g)-(i), 1/18/97& 18 AAC 50.346(c), 5/3/03]

4. Particulate Matter.

The permittee shall not cause or allow particulate matter emitted from Source IDs 1 - 7 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours. The permittee shall monitor, record and report particulate matter for Source IDs 1 - 7 in accordance with Section 13 if operated over 400 hours per calendar year.

[18 AAC 50.055(b)(1) & 50.350(g) – (i), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]

¹ For purposes of this permit, the “more than three minutes in any one hour” criterion in this condition and conditions 7 and 20 will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA.

² The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

5. Sulfur Compound Emissions.

In accordance with 18 AAC 50.055(c), the permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from Source ID(s) 1 – 7 to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97; 18 AAC 50.346(c), 5/3/02; 18 AAC 50.350(d)(1)(D); 1/18/97]

- 5.1 No liquid fuel with a weight percent sulfur in excess of 0.24 shall be burned in Source ID(s) 1- 8.

[AQC Permit No. 9572-AA003]

5.2 Sulfur Compound Emissions – Monitoring and Recordkeeping

- a. The permittee shall:
 - (i) Obtain a statement or receipt from the fuel supplier verifying the sulfur content of the fuel for each shipment of fuel delivered to the facility; or
 - (ii) Analyze a representative sample of the fuel from the facility fuel storage tank(s) once per calendar month to determine the sulfur content. Acceptable ASTM test methods include D2880-87, D4294-98, or later versions, other listings under 18 AAC 50.035, or an alternative method approved by the department.
- b. If a load of fuel contains greater than 0.75% sulfur by weight, the permittee shall calculate SO₂ emissions in PPM using the Standard Operating Permit Condition XII – SO₂ Material Balance Calculation, adopted by reference in 18 AAC 50.346(c), or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).

[18 AAC 50.350(g) - (h), 1/18/97 & 18 AAC 346(c), 5/3/02]

5.3 Sulfur Compound Emissions – Reporting. The permittee shall report in accordance with this condition.

- a. Report under Condition 47 whenever fuel is received that does not meet the requirements of Condition 5.1.
- b. Report under Condition 47 if SO₂ emissions calculated under Condition 5.2b exceed 500 ppm. When reporting under this condition, include the calculation under the Standard Operating Permit Condition XII – SO₂ Material Balance Calculation adopted by reference in 18 AAC 50.346(c).
- c. Include in the facility operating report required by Condition 49, a list of the liquid fuel sulfur content received at the facility during the reporting period or the results of the monthly analysis from the facility fuel storage tank(s). Indicate whether the sulfur content results were provided by the fuel supplier or based upon the monthly sampling of the facility storage tank(s). Include any reports required by Condition 5.3a or b.

[AQC Permit No. 9572-AA003]
[18 AAC 50.350(i), 1/18/97 & 18 AAC 346(c), 5/3/02]

Sulfur Dioxide Emissions from Fuel Burning Equipment (Source IDs 1-7)

6. The permittee shall calculate the total quantity of sulfur dioxide emitted from the facility each month and each year based on the information obtained as required by Conditions 5, 9, and 12 of this permit. The permittee shall report the results in the Operating Report described in condition 49.

[AQC Permit No. 9572-AA003]

Incinerators subject to State Emission Standards (Source ID 8)

7. **Incinerator Visible Emissions.** The permittee shall not cause or allow visibility through the exhaust effluent of Source ID 8 to be reduced by visible emissions, excluding condensed water vapor, by more than either 20 percent averaged over any six consecutive minutes² or by greater than 20 percent for a total of more than three minutes in any one hour¹, as follows

- 7.1 For Source ID 8 the permittee shall observe emissions for 18 consecutive minutes to obtain a minimum of 72 observations in accordance with Method 9 of 40 C.F.R. 60, Appendix A, at least once within six months after the effective date of this permit and every 24 calendar months thereafter.

- 7.2 Report as excess emissions, in accordance with condition 47, whenever the visible emission standard in this condition is exceeded.

[18 AAC 50.050(a)(2), 1/18/97]
[18 AAC 50.050(a), 5/3/02]

8. **Hospital/Medical/Infectious Waste Incineration.** The permittee shall not allow the total quantity (pounds) of medical/infectious wastes to exceed 10 percent of the total waste (pounds) incinerated on a calendar quarter basis:

- 8.1 Keep records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste combusted, and the weight of all other fuels and wastes combusted using Source ID 8, to demonstrate compliance with Condition 8.

- 8.2 Keep copies of the exemption claim notification provided to the Federal Administrator pursuant to 40 C.F.R. 60.32e (c)(1) and 40 C.F.R. 62.14400(c).

- 8.3 Report, under condition 47, if the amount of medical/infectious waste incinerated exceeds the 10 percent exemption threshold of Condition 8.

[40 CFR 60.32e(c)(2)&(3), 9/15/97]
[40 CFR 62.14400(c), 8/15/00]
[18 AAC 50.350(g) - (i), 6/21/98]

Avon Gas Generators (Source ID(s) 1-3)

9. The permittee shall not allow the three Avon Gas Generators combined to exceed the fuel consumption rates listed in Table 2 below.

Table 2 – Operating Limit Fuel Consumption

Average Daily Ambient Temperature	Maximum Fuel Consumption Rate (Gallons/Day)
60°F or higher	78,000
40 to 59°F	83,400
20 to 39°F	86,400
0 to 19°F	90,300
-20 to -1°F	93,900
-40 to -21°F	97,200
Less than -40°F	> 97,200

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- 9.1 For Source IDs 1 through 3, install, operate, and maintain in good working order a system for daily recording and monitoring: ambient temperature, operating time (hours/day), Avon Gas Generator speed (RPM), and fuel consumption. Permittee shall at least twice per calendar year, for each Avon Gas Generator operated over 1,000 hours per year, verify the accuracy and precision of the monitors used for ambient temperature, rpm speed, and fuel consumption. The acceptance criteria for the ambient temperature is within +/- 5 deg. F and within +/- 5% for the rpm speed and fuel consumption meters. In the event, that the instrumentation is found to exceed the acceptance criteria, the permittee shall take corrective action to repair, replace, or recalibrate the instrumentation, as appropriate, such that the acceptance criteria is met. Permittee shall maintain records of the verification checks and any corrective actions performed.
- Record the daily fuel consumption, average daily ambient temperature and average daily rpm speed for each Avon gas generator.
 - Report in the facility operating report required by Condition 49, the daily fuel consumption, average daily ambient temperature and average daily rpm speed for each Avon gas generator.

- c. indicate if fuel consumption is calculated from operating time, ambient temperature, and turbine speed, as described in Condition 9.2 rather than measured with a fuel flow meter.

[18 AAC 50.350(g) - (i), 7/2/00]
[AQC Permit No. 9572-AA003]

- 9.2 In the event of a fuel meter malfunction, calculate the fuel consumption for the Avon gas generators based on operational readings taken every four hours. The amount of fuel calculated for each 4-hour interval will be summed to estimate the total fuel consumed during a 24-hour period. The fuel consumption shall be calculated as follows:

Ambient Corrections

$$\text{beta} = \beta = 0.97698 + 0.00038722 * T_{in}$$

$$\text{delta} = \delta = P_{\text{baro}}/29.92$$

$$\text{theta} = \theta = (T_{in} + 460)/519$$

Gas Generator Speed Correction

$$N_{corr} = \frac{N_{obs}}{\sqrt{\theta}}$$

ISO Corrected Fuel Consumption

$$Q_{ISO} = \frac{-263,010 + (57.771 * N_{corr}) - 0.0023036 * (N_{corr})^2}{LHV * Density}$$

Site Fuel Consumption

$$Q_{site} = Q_{ISO} * \beta * \sqrt{\theta} * \delta * 3600 (\text{sec onds} / \text{hour}) * 4 \left(\frac{\text{hours}}{\text{time block}} \right)$$

Daily Fuel Consumption

$$Q_{total} = \sum Q_{site}$$

Where: N_{obs} is the observed speed of the gas generator (rpm).

T_{in} is the inlet temperature to the gas generator (°F).

P_{baro} is the site barometric pressure (inches Hg).

LHV is the lower heating value of the fuel (Btu/lbm).

Density is the density of the liquid fuel (lbm/gal).

Q_{site} is the fuel consumption for one 4-hour block of time (gallons).

Q_{total} is the amount of fuel consumed in one day (gallons/day).

For the above calculations to determine the fuel usage, the values for T_{in} , P_{baro} , and turbine speed, shall be taken at 4-hour intervals or less. The location of the temperature and pressure sensors shall be located in such a manner to be representative of the inlet condition of the Avon Gas generators.

[AQC Permit No. 9572-AA003]

9.3 Report, under condition 47, when the fuel limits of condition 9 are exceeded.

[AQC Permit No. 9572-AA003]
[18 AAC 350(g) – (i), 1/18/97]

NO_x Requirements for Source ID(s) 1-3

10. The permittee shall not allow the NO_x emission rate of Source IDs 1 - 3 to exceed:

- a. 140 ppmv NO_x corrected to 15% O₂, ISO conditions, for operation at 7500 rpm;
- b. 161 ppmv NO_x corrected to 15% O₂, ISO conditions, for operation between 7,501 and 7,900 rpm.

[AQC Permit No. 9572-AA003 Exhibit B]

11. The permittee shall install, operate, and maintain a continuous monitoring system to measure and record operating parameters necessary to calculate the emissions of NO_x from each Avon gas generator, based on the equation in Condition 12. Operating parameters must be recorded at least every 30 minutes.

[AQC Permit No. 9572-AA003, as amended July 2, 1997]

12. Alternative Monitoring Plan (AMP) for NO_x: The permittee shall install, calibrate, operate, and maintain instrumentation necessary to calculate NO_x emissions for each turbine on which “rim-cooling” has been installed, according to the following equation:

Ambient Corrections

$$\text{beta} = \beta = 0.97698 + 0.00038722 * T_{\text{in}}$$

$$\text{theta} = \theta = (T_{\text{in}} + 460)/519$$

Gas Generator Speed Correction

$$N_{\text{corr}} = \frac{N_{\text{obs}}}{\sqrt{\theta}}$$

Calculated Corrected Exhaust Mass Flow

$$M_{exh\ corr} = -718.28 + 0.20184 * N_{corr} - 1.1161 \times 10^{-5} * (N_{corr})^2$$

Calculated Corrected Fuel Mass Flow

$$M_{fcorr} = \frac{-263,010 + 57.771 * N_{corr} - 0.0023036 * (N_{corr})^2}{LHV}$$

Calculated Corrected Exhaust Mass / Fuel Mass Ratio

$$EF_{corr} = M_{exh\ corr} / M_{fcorr}$$

Calculated Site Air Fuel Mass Ratio

$$AF_{site} = (EF_{corr} / (\text{Beta} * \text{Theta})) - 1$$

Calculated Liquid Fuel NOx Emissions

$$NOx_{calc} = 0.0713(AF_{site})^2 - 13.438(AF_{site}) + 733.59$$

Where: N_{obs} is the observed speed of the gas generator (rpm).
 T_{in} is the inlet temperature to the gas generator (°F).
 N_{corr} is the gas generator speed corrected for inlet temperature (rpm).
LHV is the lower heating value of the fuel Btu/scf for natural gas or Btu/lbm for liquid fuel.

- 12.1 Calculate for each day the 24-hour average and maximum one-hour value of NO_x , corrected to ISO conditions and 15% oxygen for each of Source IDs 1 - 3. Calculations shall use measurements taken every 30 minutes or less. The temperature sensors shall be located in such a manner to be representative of the inlet conditions of the Avon gas generators.

[AQC Permit No. 9572-AA003, as amended July 2, 1997]

- 12.2 Record and report under Condition 49 the results of daily calculations required by Condition 12.1.

[AQC Permit No. 9572-AA003, as amended July 2, 1997]
[18 AAC 50.350(g) – (i), 1/18/97]

- 12.3 During periods that rim-cooling is installed, the permittee shall calculate the increase of NO_x emitted from the Avon Gas Generators each month based on the information obtained from Condition 12. The increase of NO_x from the Avon Gas Generators is the total measured or calculated emissions of NO_x from the Avon Gas Generators, minus the calculated (allowable) emissions assuming operation at 7,500 rpm at the same ambient temperature and 140 ppmv NO_x , corrected to 15% oxygen in the exhaust.

[AQC Permit No. 9572-AA003]

- 12.4 Permittee may operate one (1) turbine with rim-cooling up to 7,900 rpm. On or after the date that the increase in oxides of nitrogen (NO_x) reaches 39 tons per year, as determined by Condition 12.3, the permittee shall maintain a nominal operating speed of 7,500 rpm or less and an instantaneous operating speed below 7,599 rpm in all the Avon gas generators.

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- 12.5 The permittee shall immediately notify the department's Fairbanks Air Quality Maintenance Office, within 24 hours by telephone (907) 451-2139; facsimile (907) 451-2187, and in writing within five working days, to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician, when the increase in emissions of NO_x reaches 35 tons, determined as described in Condition 12.3 of this permit. The permittee shall change operations as necessary to remain below a total increase in NO_x of 39 tons per year.

[AQC Permit No. 9572-AA003]

- 12.6 During the periods that rim-cooling is installed, record and report for Source IDs 1 – 3 in accordance with condition 49:

- a. The total emissions of oxides of nitrogen, in tons, for each month.
- b. The total emissions of oxides of nitrogen, in tons, for the year.
- c. The monthly increase in oxides of nitrogen, in tons.
- d. The year-to-date increase in oxides of nitrogen, in tons.
- e. The highest average volumetric concentration of oxides of nitrogen, in ppm, for any day in the reporting period.
- f. The highest average volumetric concentration of oxides of nitrogen, in ppm, for any hour in the reporting period.

[AQC Permit No. 9572-AA003]

- 12.7 Following the date any rim-cooled unit at the facility operates above 7,500 RPM for one day or more on a daily average basis, the permittee shall conduct a source test³ within two years of such date, in accordance with Section 9, to demonstrate compliance with the AMP predicted NO_x emissions. Additional biannual source testing is required only if the unit operates above 7,500 RPM following the date of the most recent test.

- 12.8 Record and report with the operating report in Condition 49 any time when the daily average for the rim-cooled Avon Generator exceeds 7,500 RPM.

[AQC Permit No. 9572-AA003, as amended July 2, 1997]

[18 AAC 350(g) – (i), 5/3/02]

³ Monitoring, recordkeeping, and reporting for Avon generators using 'rim cooling' are not required upon removal of the 'rim cooling' apparatus from the turbine.

13. Turbine Relocations.

The permittee may move turbine engines, from a pool of turbine engines, from location to location between TAPS pump stations to allow for maintenance of turbine engines. Conditions 13.1 through 13.5 apply only to gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour.

- 13.1 The permittee shall maintain, for each turbine engine, records of the maintenance, repairs, parts replacement, including the date of each servicing, the service performed, and the costs of the service.
- 13.2 The permittee shall record in a log the following information each time a turbine engine from the pool is switched into service:
 - a. The date the switched occurred;
 - b. Identification of the removed turbine and the substitute turbine engine by make, model, date of manufacture, serial number, maximum heat input, and location.
- 13.3 The permittee shall submit with the first facility operating report required by Condition 49 a complete list of all turbine engines maintained as part of a pool which contains an NSPS Subpart GG turbine, with information on the make, model, date of manufacture, serial number, maximum heat input, and location for each turbine engine.
- 13.4 The permittee shall notify the department in writing no later than 14 days after any rotation of an NSPS Subpart GG turbine into an operating turbine position.
- 13.5 The permittee shall submit a copy of the records required by Condition 13.2 with the facility operating report required by Condition 49 for all turbine engines switched during the reporting period.

[40 CFR 70.6(a)(9), 11/18/98]
[EPA Letter, 40 CFR 60 Subpart GG Applicability Determination, 8/1/02]
[18 AAC 50.350(g) - (i) & 50.346(c), 5/3/02]

Sources Subject to Federal New Source Performance Standards (NSPS),
Subparts A and GG (Source ID 3)

The requirements of NSPS Subparts A and GG in Condition 14, and the state requirements in Condition 15 will not apply to the mainline unit turbines equipped with rim-cooling if EPA determines that the addition of 'rim cooling' did not constitute a 40 CFR 60.14 modification. At the time of permit issuance, only mainline unit #3, which contains Source ID 3, is equipped with rim cooling.

14. Turbines Subject to NSPS, 40 CFR Part 60 Subparts A and GG.

For each rim-cooled position, the permittee is required to comply with the following 40 CFR 60 Subpart A and GG requirements until such time that EPA determines that the addition of 'rim-cooling' did not constitute a 40 CFR 60.14 modification. The permittee shall:

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.332(a), 7/1/99]

14.1 Not emit NO_x in excess of 161 PPM at 15 percent O₂, ISO conditions.

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.332 (a) & (d), 7/1/99]

14.2 Not burn fuel with a sulfur content in excess of 0.8 percent by weight.

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.333(a) & (b), 7/1/99]

14.3 Monitor the sulfur content of the fuel being burned in accordance with 40 CFR 60.334(b), and keep records in accordance with Condition 46. Monitoring for fuel nitrogen is not required consistent with the fuel monitoring exemption approved by EPA (EPA letter dated 6/18/96).

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.334(b), 7/1/99]

14.4 Submit the fuel monitoring reports semiannually in accordance with 40 CFR 60.7(c), (d), and 60.334(c).

[18 AAC 50.040(a)(1) & (a)(2)(V), 7/2/00]
[40 C.F.R. 60.7(c) and (d), 60.334 (c), 7/1/99]

14.5 Maintain records of startup, shutdown, and malfunction as required by 40 CFR 60.7(b).

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.7(b), 7/1/99]

14.6 Maintain a record of all measurements, including performance tests, and all other information under 40 CFR Part 60 as required by 40 CFR 60.7(f).

[18 AAC 50.040(a)(1) & (a)(2)(V), 7/2/00]
[40 C.F.R. 60.7(f), 60.334 and 60.335, 7/1/99]

14.7 Maintain and operate in a manner consistent with good air pollution control practices for minimizing emissions as required by 40 CFR 60.11(d).

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.11(d), 7/1/99]

14.8 Not build, erect, install, or use any article, machine, equipment or process which conceals an emission which would otherwise constitute a violation of an applicable standard as required by 40 CFR 60.12.

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.12, 7/1/99]

Turbines Subject to NSPS Subpart GG

15. NO_x Monitoring, Recordkeeping, and Reporting for turbines subject to Condition 14

15.1 Waivers.

The permittee shall provide to the department a written copy of any U.S. EPA granted waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules upon request by the department. The permittee shall keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule with the permit.

15.2 Monitoring.

For each rim-cooled unit, permittee shall monitor and report NO_x emissions in accordance to Conditions 11 and 12.

[18 AAC 50.350(g) - (i), 5/3/02, 50.220(a) - (c), 1/18/97,
& 50.040(a)(1), 8/15/02]

16. Report per condition 47 when the emission limits in conditions 14.1 or 14.2 are exceeded.

[18 AAC 50.350(i), 7/2/00]
[18 AAC 50.040(a)(2)(V), 7/2/00]

Section 6. *Alternate Operating Rampdown Mode*

Alyeska pump stations were originally intended to operate their equipment at varying levels depending upon the rate that North Slope crude oil was supplied to the Trans Alaska Pipeline System for transportation to the Valdez Marine terminal. If crude oil throughput falls below certain rates, it is possible to discontinue pumping at certain pump stations without shutting down the pipeline. A pump station that is no longer pumping oil is termed to be in a rampdown mode. In the rampdown mode the mainline Avon turbines will not be in operation. Most, but not all, other emission sources will not be in operation. To protect maintenance and security personnel, as well as operate the vital electronic equipment some heat and electricity must be provided to limited parts of any ramped-down pump station.

17. The permittee shall record in a log when the facility is placed into and when the facility is removed from the rampdown mode. These records shall be included in the facility operating report required by Condition 49.

18. For sources that continue to operate during the rampdown mode, the permittee shall comply with all applicable recordkeeping, monitoring and reporting requirements of this permit. Sources that are not operated during the rampdown mode are excluded from the monitoring, recordkeeping, and reporting requirements contained in this permit except as required by Conditions 18.1 and 18.2.

18.1 Permitted sources that are not operated during the rampdown mode are required to record and report, in accordance in the next operating report required by Condition 49, the following information:

- a. Source ID and tag number,
- b. last date and time of operation, and
- c. final hour meter reading and final fuel meter reading for those sources that have hourly or fuel consumption limits.

18.2 Permitted sources that are placed back in to operation during the rampdown mode, or when the facility is removed from rampdown mode, must report, in the next operating report required by Condition 49, the following information:

- a. Source ID and tag number, and
- b. Start date and time.

Section 7. Insignificant Sources

This section contains the requirements that the permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, recordkeeping, and reporting for insignificant sources that the department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to insignificant sources.

19. For sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

19.1 the permittee shall submit the compliance certifications of Condition 50 based on reasonable inquiry;

19.2 the permittee shall comply with the requirements of Condition 30;

19.3 the permittee shall report in the operating report required by 49 if a source listed in this condition because of actual emissions less than the thresholds of 18 AAC 50.335(r) has actual emissions greater than any of those thresholds,

19.4 no other monitoring, record keeping, or reporting is required.

[18 AAC 50.346(b)(1), 5/3/02]

20. The permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by any of the following:

20.1 more than 20% for more than three minutes in any one hour⁴,

[18 AAC 50.055(a)(1), 1/18/97, 40 CFR 52.70, 11/18/98]

20.2 more than 20% averaged over any six consecutive minutes⁵.

[18 AAC 50.055(a)(1), 5/3/02]

21. The permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

22. The permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

⁴ See Footnote 1

⁵ See Footnote 2

Section 8. Generally Applicable Requirements

23. Asbestos NESHAP.

The permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A to 40 CFR 61 Subpart M.

[18 AAC 50.040(b)(3) & 50.350(d)(1), 1/18/97]
[40 C.F.R. 61, Subparts A & M, 12/19/96]

24. Refrigerant and Halocarbon Recycling and Disposal.

The permittee shall comply with the standards for recycling and emission reduction of refrigerants and Halon set forth in 40 C.F.R. 82, Subparts F through H.

[18 AAC 50.040(d) & 50.350(d)(1), 1/18/97]
[40 C.F.R. 82, Subpart F & H, 7/1/97]

25. Good Air Pollution Control Practice.⁶

The permittee shall do the following for Source ID(s) 1 to 8:

- a. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
- b. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format;
- c. Provide copies of the facility's maintenance procedures when requested by the department

[18 AAC 50.030 & 50.346(b)(2), 5/3/02 & 18 AAC 50.350(f)(2) & (3), 1/18/97]

26. Dilution.

The permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

27. Reasonable Precautions to Prevent Fugitive Dust.

A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.045(d), 5/3/02]
[18 AAC 50.346(c), 5/2/02]

⁶ This condition does not apply to NSPS, NESHAPs and Part 82 sources..

28. Stack Injection.

The permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the department.

[18 AAC 50.055(g), 1/18/97]

29. Open Burning and Firefighter Training.

The permittee shall comply with the applicable requirements of 18 AAC 50.065(a – k) when conducting open burning at the facility.

29.1 Firefighter Training: Structures.

A fire service may open burn structures for firefighter training without ensuring maximum combustion efficiency under the following circumstances:

- a. before igniting the structure, the fire service shall
 - (i) obtain department approval for the location of the proposed firefighter training; approval will be based on whether the proposed open burning is likely to adversely affect public health in the neighborhood of the structure;
 - (ii) visually identify materials in the structure that might contain asbestos, test those materials for asbestos, and remove all materials that contain asbestos;
 - (iii) ensure that the structure does not contain
 - (a) putrescible garbage;
 - (b) electrical batteries;
 - (c) stored chemicals such as fertilizers, pesticides, paints, glues, sealers, tars, solvents, household cleaners, or photographic reagents;
 - (d) stored linoleum, plastics, rubber, tires, or insulated wire;
 - (e) hazardous waste;
 - (f) lead piping;
 - (g) plastic piping with an outside diameter of four inches or more; or
 - (h) urethane or another plastic foam insulation;
 - (iv) provide public notice consistent with 18 AAC 50.065(j); and

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- (v) ensure that a fire-service representative is on-site before igniting the structure;
 - b. the fire service shall ignite and conduct training on only one main structure and any number of associated smaller structures at a time; examples of associated smaller structures are garages, sheds, and other outbuildings; and
 - c. the fire service shall respond to complaints in accordance with 18 AAC 50.065(k).

29.2 Firefighter Training: Fuel Burning.

Unless a greater quantity is approved by the department, a fire service may open burn up to 250 gallons of uncontaminated fuel daily and up to 600 gallons yearly for firefighter training without ensuring maximum combustion efficiency. To conduct this training without prior written department approval, the fire service shall

- a. provide public notice consistent with 18 AAC 50.065(j) before burning more than 20 gallons of uncontaminated fuel, unless waived in writing by the department; and
- b. respond to complaints in accordance with 18 AAC 50.065(k).

[18 AAC 50.065, 1/18/97]

30. Air Pollution Prohibited.

No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.346(a)(2), 5/3/02; 18 AAC 50.110, 5/26/72; 18 AAC 50.040(e), 7/2/00]

- 30.1 If emissions present a potential threat to human health or safety, the permittee shall report any such emissions according to condition 47.
- 30.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the permittee shall investigate the complaint to identify emissions that the permittee believes have caused or are causing a violation of condition 30.
- 30.3 The permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if
 - a. after an investigation because of a complaint or other reason, the permittee believes that emissions from the facility have caused or are causing a violation of condition 30; or
 - b. the department notifies the permittee that it has found a violation of condition 30

30.4 The permittee shall keep records of

- a. the date, time, and nature of all emissions complaints received;
- b. the name of the person or persons that complained, if known;
- c. a summary of any investigation, including reasons the permittee does or does not believe the emissions have caused a violation of condition 30; and
- d. any corrective actions taken or planned for complaints attributable to emissions from the facility.

30.5 With each facility operating report under condition 49, the permittee shall include a brief summary report which must include

- a. the number of complaints received;
- b. the number of times the permittee or the department found corrective action necessary;
- c. the number of times action was taken on a complaint within 24 hours; and
- d. the status of corrective actions the permittee or department found necessary that were not taken within 24 hours.

30.6 The permittee shall notify the department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the permittee has initiated corrective action within 24 hours of receiving the complaint.

31. Technology-Based Emission Standard.

If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard⁷, the permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.

[18 AAC 50.235(a) & 50.350(f)(3), 1/18/97]

⁷ *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

32. Permit Renewal.

To renew this permit, the permittee shall submit an application under 18 AAC 50.335 no sooner than **October 2, 2006** and no later than **October 1, 2007**.

[18 AAC 50.335(a), 1/18/97]

Section 9. General Source Testing and Monitoring Requirements

33. Requested Source Tests.

In addition to any source testing explicitly required by this permit, the permittee shall conduct source testing as requested by the department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 1/18/97; 18 AAC 50.345(k), 5/3/02]

34. Operating Conditions.

Unless otherwise specified by an applicable requirement or test method, the permittee shall conduct source testing

[18 AAC 50.220(b) & 50.350(g), 1/18/97]

34.1 at a point or points that characterize the actual discharge into the ambient air; and

34.2 at the maximum rated burning or operating capacity of the source or another rate determined by the department to characterize the actual discharge into the ambient air.

35. Reference Test Methods.

The permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

35.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.040(a), 7/2/00]
[18 AAC 50.220(c)(1)(A) & 50.350(g), 1/18/97]
[40 C.F.R. 60, 7/1/99]

35.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 50.220(c)(1)(B) & 50.350(g), 1/18/97]
[40 C.F.R. 61, 12/19/96]

35.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 7/2/00]
[18 AAC 50.220(c)(1)(C) & 50.350(g), 1/18/97]
[40 C.F.R. 63, 7/1/99]

- 35.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures specified in Method 9 of Appendix A to 40 CFR 60.

[18 AAC 50.030, 12/30/00]
[18 AAC 50.220(c)(1)(D) & 50.350(g), 1/18/97]

- 35.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 7/2/00]
[18 AAC 50.220(c)(1)(E) & 50.350(g), 1/18/97]
[40 C.F.R. 60, Appendix A, 7/1/99]

- 35.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M.

[18 AAC 50.035(b)(2), 7/2/00]
[18 AAC 50.220(c)(1)(F) & 18 AAC 50.350(g), 1/18/97]
[40 C.F.R. 51, Appendix M, 7/1/99]

- 35.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(19), 7/2/00]
[18 AAC 50.220(c)(2) & 50.350(g), 1/18/97]
[40 C.F.R. 63, Appendix A, Method 301, 7/1/99]

36. Excess Air Requirements.

To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions⁸

[18 AAC 50.220(c)(3), 50.350(g) & 50.990(88), 1/18/97]

37. Test Deadline Extension.

The permittee may request an extension to a source test deadline established by the department. The permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the department's appropriate division director or designee.

[18 AAC 50.345(l), 5/3/02]

⁸ *Standard conditions* means dry gas at 70° F and an absolute pressure of 760 millimeters of mercury, as defined in 18 AAC 50.990(88) effective 7/2/00.

38. Test Plans.

Before conducting any source tests, the permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the source will operate during the test and how the permittee will document this operation. A complete plan must be submitted within 60 days of receiving a request under condition 33 and at least 30 days before the scheduled date of any tests.

[18 AAC 50.345(m), 18 AAC 50.350(b)(3) & 18 AAC 50.350(g), 5/3/02]

39. Test Notification.

At least ten days before conducting a source test, the permittee shall give the department written notice of the date and time the source test will begin.

[18 AAC 50.345(n) & 18 AAC 50.350(b)(3), 5/3/02]

40. Test Reports.

Within 60 days after completing a source test, the permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The permittee shall certify the results as set out in condition 43. If requested in writing by the department, the permittee must provide preliminary results in a shorter period of time specified by the department.

[18 AAC 50.345(o), 18 AAC 50.350(b)(3) & 18 AAC 50.350(h) – (i), 5/3/02]

41. Test Exemption.

The permittee is not required to comply with conditions 38, 39, and 40 (Test Plans, Test Notifications and Test Reports) when the exhaust is observed for visible emissions under the Method 9 Plan.

[18 AAC 50.345(a), 5/3/02]

42. Particulate Matter Calculations.

In source testing for compliance with the particulate matter standards in conditions 3 and 20, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f) & 50.350(g), 1/18/97]

Section 10. General Recordkeeping, Reporting, and Compliance Certification Requirements

43. Certification.

The permittee shall certify all reports, compliance certifications, or other documents submitted to the department and required under the permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. When certifying a compliance certification, the official's signature must be notarized.

[18 AAC 50.205, 18 AAC 50.345(j), 18 AAC 50.350(b)(3) & 18 AAC 50.350(i), 5/3/02]

44. Submittals.

Unless otherwise directed by the department or this permit, the permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.350(i), 1/18/97]

45. Information Requests.

The permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the permittee shall furnish to the department copies of records required by this permit. The department, in its discretion, will require the permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200, 50.345(a)(8), 50.350(b)(3), & 50.350(g) – (i), 1/18/97]

46. Recordkeeping Requirements.

The permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 ACC 50.350(h), 1/18/97]

46.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

46.2 records of all monitoring required by this permit, and information about the monitoring including:

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- a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
 - b. sampling dates and times of sampling or measurements;
 - c. the operating conditions that existed at the time of sampling or measurement;
 - d. the date analyses were performed;
 - e. the location where samples were taken;
 - f. the company or entity that performed the sampling and analyses;
 - g. the analytical techniques or methods used in the analyses; and
 - h. the results of the analyses.

47. Excess Emission and Permit Deviation Reports.

47.1 Except as provided in Condition 30, the permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

- a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commences or is discovered, report
 - (i) emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the permittee believes to be unavoidable;
- b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology based emission standard;
- c. report all other excess emissions and permit deviations
 - (i) within 30 days of the end of the month in which the emissions or deviation occurs or was discovered, except as provided in condition 47.1c(ii);
 - (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the department provides written permission to report under condition 47.1c(i); and
 - (iii) for failure to monitor, as required in other applicable conditions of this permit.

47.2 When reporting excess emissions, the permittee must report using either the department's online form, which can be found at www.dec.state.ak.us/awq/excess/report.asp, or, if the permittee prefers, the form contained in Section 15 of this permit. The permittee must provide all information called for by the form that is used.

47.3 When reporting a permit deviation, the permittee must report using the form contained in Section 15 of this permit. The permittee must provide all information called for by the form.

47.4 If requested by the department, the permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), & 50.350(i), 1/18/97; and 18 AAC 50.346(a)(3), 5/3/02
[18 AAC 50.235(a)(2), 50.240(c), & 50.350(i), 1/18/97]

48. NSPS and NESHAP Reports. The permittee shall:

48.1 attach to the facility operating report required by condition 49, copies of any NSPS, NESHAPs, or MACT reports required by 40 CFR Parts 60, 61 or 63 and submitted to the U.S. Environmental Protection Agency (EPA) Region as required by Conditions 14 and 23, and

48.2 notify the department and provide a written copy of any EPA-granted waiver of the federal emission standards, record keeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules within 30 days after receipt of a waiver or schedule. Keep a copy of each EPA issued monitoring waiver or custom monitoring schedule with the permit at the facility.

[18 AAC 50.040, 7/2/00]
[18 AAC 350(i)(2), 1/18/97]
[40 C.F.R. 60 & 40 C.F.R. 61, 7/1/99]

49. Operating Reports.

During the life of this permit, the permittee shall submit an original and two copies of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

49.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

49.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 49.1, either

- a. The permittee shall identify
 - (i) the date of the deviation;
 - (ii) the equipment involved;

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- (iii) the permit condition affected;
 - (iv) a description of the excess emissions or permit deviation; and
 - (v) any corrective action or preventive measures taken and the date of such actions.

- b. when excess emissions or permit deviations have already been reported under condition 47, the permittee may cite the date or dates of those reports.

49.3 The operating report must include a listing of emissions monitored under Section 13, which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The permittee shall include in the report

- a. the date of the emissions;
- b. the equipment involved;
- c. the permit condition affected; and
- d. the monitoring result which triggered the additional monitoring.

[18 AAC 50.346(b)(3), 5/3/02]

50. Annual Compliance Certification.

Each year by March 31, the permittee shall compile and submit to the department an original and two copies of an annual compliance certification report as follows:

50.1 For each permit term and condition set forth in Section 3 through Section 11, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 1/18/97]

- a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;
- b. state whether compliance is intermittent or continuous;
- c. briefly describe each method used to determine the compliance status; and
- d. notarize the responsible official's signature.

50.2 Submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j), 1/18/97]

Section 11. Standard Conditions Not Otherwise Included in the Permit

- 51.** The permittee must comply with each permit term and condition. Noncompliance constitutes a violation of AS 46.14, 18 AAC 50, and the Clean Air Act, except for those requirements designated as not federally-enforceable, and is grounds for:

51.1 an enforcement action,

51.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280, or

51.3 denial of an operating-permit renewal application.

[18 AAC 50.345(a)(1) & 50.350(b)(3), 1/18/97]

- 52.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.345(a)(2) & 50.350(b)(3), 1/18/97]

- 53.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit.

[18 AAC 50.345(a)(3) & 50.350(b)(3), 1/18/97]

- 54.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

54.1 included and specifically identified in the permit, or

54.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.345(a)(4) & 50.350(b)(3), 1/18/97]

- 55.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any operating permit condition.

[18 AAC 50.345(a)(5) & 50.350(b)(3), 1/18/97]

- 56.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.345(a)(6) & 50.350(b)(3), 1/18/97]

- 57.** The permittee shall allow an officer or employee of the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to:

57.1 enter upon the premises where a source subject to the operating permit is located or where records required by the permit are kept,

57.2 have access to and copy any records required by the permit,

-
- 57.3 inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit, and
- 57.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.345(a)(7) & 50.350(b)(3), 1/18/97]

Section 12. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the facility application, this section of the permit contains the requirements determined by the department not to be applicable to the Pump Station 12 (PS 12) facility.

Table 3 identifies the sources that are not subject to the specified requirements at the time of permit issuance. Some of the requirements listed below may become applicable during the permit term due to an invoking event, even though the requirement is deemed inapplicable at the time of permit issuance.

- 58.** If any of the requirements listed in Table 3 become applicable during the permit term, the permittee shall comply with such requirements on a timely basis by obtaining a construction permit or an operating permit revision, as necessary.

Table 3 - Permit Shields Granted.

Source or Group of Sources	Requirements Not Applicable	Reason for non-applicability
Source ID 8 <i>Incinerator:</i> 42-PK-11	18 AAC 50.050(a)(1) - Incinerator Emission Standards	Incinerator is not a “municipal wastewater treatment plant sludge incinerator,” because it does not incinerate any sludge, including wastewater treatment plant sludge.
	18 AAC 50.050(b) Incinerator Emission Standards	There is no PM grain loading standard for incinerators with a rated capacity less than 1000 pounds per hour, which combusts wastes containing less than 10 percent sewage sludge (dry basis), or serves less than 10,000 persons.
	40 C.F.R. 60 Subpart E - Standards of Performance for Incinerators	Charging rate capacity less than threshold (50 tons/day) [40 C.F.R. 60.50(a)].
	40 C.F.R. 60 Subparts Ca, Ea, and Eb Standards of Performance for Municipal Waste Combustors	Commenced construction prior to effective date of subparts and capacity less than threshold (250 tons/day). The source has not been modified or reconstructed since the effective date of the standard.
	40 C.F.R. 60 Subpart O Standards of Performance for Sewage Treatment Plants	The incinerator has not and does not combust wastes containing 10 percent sewage sludge (dry basis) produced by a municipal sewage treatment plant that combusts more than 1,000 kg sewage sludge (dry basis) per day.
	40 C.F.R. 61 Subpart E - National Emission Standards for Mercury	The source does not incinerate or dry wastewater treatment plant sludges as defined by § 61.51(1)
	40 C.F.R. 60.30e to 60.39e, not including 60.32e(c) - Subpart Ce - Emission Guidelines for Existing Hospital/Medical/Infectious Waste Incinerators (HMIWI).	If the permittee meets the exemption criteria specified in 40 C.F.R. 60.32e (c) and reflected in Condition 8, the permittee is then not subject to the remaining requirements of this subpart.

Source or Group of Sources	Requirements Not Applicable	Reason for non-applicability
Tank: 220 - Crude Oil Breakout	40 C.F.R. 60 Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids	Commenced construction prior to effective date of subpart (May 18, 1978). The tank has not been modified or reconstructed since the effective date of the standard. The tank is a crude oil breakout tank (not storage vessel as defined in 40 C.F.R. 60) and part of a pipeline system as defined by 49 C.F.R. 195.2.
	40 C.F.R. 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)	Commenced construction prior to effective date of subpart (July 23, 1984). The tank has not been modified or reconstructed since the effective date of the standard. The tank is a crude oil breakout tank (not storage vessel as defined in 40 C.F.R. 60) and part of a pipeline system as defined by 49 C.F.R. 195.2.
	40 C.F.R. 60 Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids	Subpart K is a work practice standard. In the case <i>Adamo Wrecking</i> , 434 US 257 (1978), the U.S. Supreme Court determined that work practices standards were not authorized by the Clean Air Act. The EPA documented this decision for purposes of Subpart K in a memorandum dated August 10, 1979. EPA transmitted a specific letter to Alyeska stating the application of the decision for the crude oil tanks. Therefore, Subpart K is not enforceable. In addition, the tank was not modified or reconstructed during the applicable time period of Subpart K.
Tanks: 227 & 228-Turbine Fuel Tanks	40 C.F.R. 60 Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids	Commenced construction prior to effective date of subpart (May 18, 1978). The tank has not been modified or reconstructed since the effective date of the standard. In addition, diesel fuel oils are excluded from the definition of a petroleum liquid [40 CFR 60.111a(b)].
	40 C.F.R. 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)	Commenced construction prior to effective date of subpart (July 23, 1984). The tank has not been modified or reconstructed since the effective date of the standard.
	40 C.F.R. 60 Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids	Subpart K is a work practice standard. In the case <i>Adamo Wrecking</i> , 434 US 257 (1978), the U.S. Supreme Court determined that work practices standards were not authorized by the Clean Air Act. The EPA documented this decision for purposes of Subpart K in a memorandum dated August 10, 1979. EPA transmitted a specific letter to Alyeska stating the application of the decision for the crude oil tanks. Therefore, Subpart K is not enforceable. In addition, the tank was not modified or reconstructed during the applicable time period of Subpart K, and diesel fuel oils are excluded from the definition of a petroleum liquid [40 CFR 60.111(b)].
Source ID 1 and 2 <i>Gas turbine:</i> 42-P-2AT, 42-P-2BT	40 CFR 60 Subpart GG – Standards of Performance for Stationary Gas Turbines	Commenced construction prior to effective date of subpart (10/3/77). At the time of the Title V permit application, the turbine has not been modified or reconstructed, as defined in 40 CFR 60.14 or 60.15, respectively.

Source or Group of Sources	Requirements Not Applicable	Reason for non-applicability
Source ID 3 <i>Gas Turbine:</i> 42-P-2CT	40 CFR 60 Subpart GG – Standards of Performance for Stationary Gas Turbines: Subpart 60.332(a)(1) – Standards for NO _x	Standard applies to Electric Utility Stationary Gas Turbines, as defined in 40 CFR 60.331(q). These sources do not provide any electric power to utility power distribution systems [40 CFR 60.332(b)]
	§60.334(a) - Monitoring of Operations §60.335(c)(1) - Test Methods and Procedures	Applies only to affected turbines equipped with water injection to control emissions of NO _x . Source is not equipped with water or steam injection to control emissions of NO _x . The turbines meet the standard without controls.
	§60.334(b) - Monitoring of Operations (Fuel Nitrogen Only) §60.335(a) - Test Methods and Procedures	EPA Region X waived fuel nitrogen monitoring for NSPS affected stationary gas turbines (ref. correspondence EPA dated 6/18/96).
	40 C.F.R. 60 Subpart A - General Provisions §60.7(a)(1), (2) & (3) – Notification and Recordkeeping §60.8(a) - Performance Test (Initial Performance Test Only)	Notifications required by Subpart A were submitted. These requirements were one-time requirements.
	§60.7(a)(4) - Notification and Recordkeeping	This requirement only applies to “existing facilities”, as defined in 40 C.F.R. 60.2.
Source ID 4 <i>Gas Turbine:</i> 42-G-3AT	40 CFR 60 Subpart GG – Standards of Performance for Stationary Gas Turbines	Commenced construction prior to effective date of subpart (10/3/77). At the time of the Title V permit application, the turbine has not been modified or reconstructed, as defined in 40 CFR 60.14 or 60.15, respectively.
Source ID 5 <i>Gas Turbines:</i> 42-G-2AT	40 C.F.R. 60 Subpart GG - Standards of Performance for Stationary Gas Turbines	Maximum heat input capacity at peak load less than 10.7 gigajoules per hour (10 MMBtu/hr) (based on lower heating value of fuel fired)

Source or Group of Sources	Requirements Not Applicable	Reason for non-applicability
Source IDs 6 & 7 <i>Eclipse Therminol Heaters</i> <i>42-H-1A</i> <i>42-H-1B</i>	40 C.F.R. 60 Subpart Dc	Commenced construction prior to effective date of subpart (6/9/89). At the time of this application, boilers have not been modified or reconstructed, as defined by 40 C.F.R. 60.14 or 60.15, respectively.
Facility-Wide	40 C.F.R. 60 Subpart LLL - Standards of Performance for Onshore Natural Gas Processing Plants	Facility does not process natural gas [40 C.F.R. 60.640] and commenced construction prior to effective date of subpart (January 20, 1984). Facility has not been modified or reconstructed since the effective date of the standard.
Facility-Wide	40 C.F.R. 61 Subpart A - General Provisions	Other than the asbestos renovation and demolition requirements of Subpart M this subpart does not apply to this facility because it only applies where there are subparts applicable to the facility and no other Part 61 subparts apply to this facility.
Facility-Wide	40 C.F.R. 61 Subpart J - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene	No process components in <i>benzene service</i> , as defined by subpart (10 percent benzene by weight) [40 C.F.R. 61.110 and 61.111].
Facility-Wide	40 C.F.R. 61 Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources)	No process components in <i>volatile hazardous air pollutant (VHAP) service</i> , as defined by subpart (≥ 10 percent VHAP by weight) [40 C.F.R. 61.241 and 61.245]. This subpart only applies where identified by another applicable Part 61 subpart [40 C.F.R. 61.240].
Facility-Wide	40 C.F.R. 61 Subpart Y - National Emission Standard for Benzene Emissions from Benzene Storage Vessels	The facility does not have storage tanks that store benzene as defined by the standards in 40 C.F.R. 61.270(a).
Facility-Wide	40 C.F.R. 61 Subpart BB - National Emission Standard for Benzene Emissions from Benzene Transfer Operations	Crude oil and petroleum distillates are exempt from this subpart [40 C.F.R. 61.300]. Other than crude oil and other petroleum distillates there are no other benzene containing substances where loading occurs at this facility.
Facility-Wide	40 C.F.R. 61 Subpart FF - National Emission Standard for Benzene Waste Operations	This subpart only applies to chemical manufacturing plants, coke byproduct recovery plants and petroleum refineries [40 C.F.R. 61.340]. This facility does not include any of those

Source or Group of Sources	Requirements Not Applicable	Reason for non-applicability
		activities.
Facility-Wide	40 C.F.R. 61 Subpart M - National Emission Standard for Asbestos §61.142 - Standard for Asbestos Mills	Facility is not an Asbestos Mill.
Facility-Wide	§61.144 - Standard for Manufacturing	Facility does not engage in any manufacturing operations using commercial asbestos.
Facility-Wide	§61.146 - Standard for Spraying	Facility does not spray or apply asbestos containing materials.
Facility-Wide	§61.147 - Standard for Fabricating	Facility does not engage in any fabricating operations using commercial asbestos.
Facility-Wide	§61.149 - Standard for Waste Disposal for Asbestos Mills	Applies only to those facilities subject to 40 C.F.R. 61.142 (Asbestos Mills).
Facility-Wide	§61.151 - Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations	Applies only to those facilities subject to 40 C.F.R. 61.142, 61.144, or 61.147 (Asbestos Mills, manufacturing or fabricating).
Facility-Wide	§61.153 - Standard for Reporting	No reporting requirements apply for sources subject to 40 C.F.R. 61.145 (demolition and renovation) [40 C.F.R. 61.153(a)].
Facility-Wide	§61.154 - Standard for Active Waste Disposal Sites	Facility not an active waste disposal site and does not receive asbestos containing waste material.
Facility-Wide	§61.155 - Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations	Facility does not process regulated asbestos containing material (RACM).
Facility-Wide	40 C.F.R. 63 Subpart T - National Emission Standards for Halogenated Solvent Cleaning	Facility does not operate halogenated solvent cleaning machines.
Storage Tanks	40 C.F.R. 63 Subpart OO - National Emission Standards for Tanks - Level 1	Provisions only apply to tanks subject to a subpart of 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63 Subpart OO. The facility does not include any tanks subject to any subpart of Part 60, 61, or 63.
Portable Storage Containers	40 C.F.R. 63 Subpart PP - National Emission Standards for Containers	Provisions only apply to portable containers, as defined in §63.921, subject to a subpart of 40 C.F.R. 60, 61, or 63 that specifically references 40 C.F.R. 63 Subpart PP. The facility does not include any containers subject to any subpart of Part 60, 61, or 63.
	40 C.F.R. 63 Subpart RR - National	Provisions only apply to drain systems affected by 40 C.F.R.

Source or Group of Sources	Requirements Not Applicable	Reason for non-applicability
Drain Systems	Emission Standards for Individual Drain Systems	60, 61, or 63 that specifically reference 40 C.F.R. 63 Subpart RR. The facility does not include any drain systems subject to any subpart of Part 60, 61, or 63 [40 C.F.R. 63.960].
Oil-Water Separators	40 C.F.R. 63 Subpart VV - National Emission Standards for Oil-Water Separators and Organic-Water Separators	EPA stated that these provisions were placed within this standard only for convenience and only where a facility is subject to another Part 60, 61, or 63 subpart that references Subpart VV [40 C.F.R. 63.1040]. This facility is not subject to any subpart in Part 60, 61, or 63 that references Subpart VV.
Facility-Wide	40 C.F.R. 68 - Accidental Release: Risk Management Plan (RMP)	Part 68 applies to "stationary sources" [40 C.F.R. 68.10]. "Stationary source" is defined for the purposes of Part 68 to exclude facilities engaged in the transportation of hazardous liquids and subject to 49 CFR Parts 192, 193, and 195 [40 CFR 68.3]. TAPS PS_12 transports and stores crude oil subject to the federal Pipeline Safety Act and 49 CFR Part 195. The transportation of crude oil by this pump station and the incidental storage in the pump station breakout tank are not activities that fall within the definition of a stationary source. Therefore, Part 68 does not apply to PS-12. There are not threshold quantities or other 112(r) regulated substances at PS-12. Therefore, Part 68 does not apply to PS-12.
Facility-Wide	40 C.F.R. 82.1 Subpart A - Production and Consumption Controls	Facility does not produce, transform, destroy, import or export Class 1 or Group I or II substances or products.
Facility-Wide	40 C.F.R. 82.30 Subpart B - Servicing of Motor Vehicle Air Conditioners	Facility does not service motor vehicle air conditioners.
Facility-Wide	40 C.F.R. 82.60 Subpart C - Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured with Class II Substances	Facility does not manufacture or distribute Class I and II products or substances.
Facility-Wide	40 C.F.R. 82.80 Subpart D - Federal Procurement	Subpart applies only to Federal departments, agencies, and instrumentalities.
Facility-Wide	40 C.F.R. 82.100 Subpart E - The Labeling of Products Using Ozone-Depleting Substances	Facility does not manufacture or distribute Class I and II products or substances.
Facility-Wide	40 C.F.R. 82.158 Subpart F - Recycling and Emissions Reduction	Facility does not manufacture or import recovery and recycling equipment.
Facility-Wide	40 C.F.R. 82.160 - Recycling and Emissions Reduction	Facility does not contract equipment testing organizations to certify recovery and recycling equipment.
Facility-Wide	40 C.F.R. 82.164 - Recycling and Emissions Reduction	Facility does not sell reclaimed refrigerant.

Source or Group of Sources	Requirements Not Applicable	Reason for non-applicability
Facility-Wide	18 AAC 50.055(a)(2) - (a)(9)	Facility does not operate sources specific to the listed standards.
Facility-Wide	18 AAC 50.055(b)(2) - (b)(6)	Facility does not operate sources specific to the listed standards.
Facility-Wide	18 AAC 50.055(d) - (f)	Facility does not operate sources specific to the listed standards.
Facility-Wide	18 AAC 50.055(g)	The facility does not emit any emissions from a stack other than process emissions, products of combustion, or materials introduced to control pollutant emissions without the approval of the department. Incinerators are not fuel burning equipment as defined in 18 AAC 50.990(40). Therefore the solid waste incinerators are exempt from this requirement.
Facility-Wide	18 AAC 50.075	Facility sources do not combust wood.

[18 AAC 50.350(l), 1/18/97]

Section 13. Visible Emissions and PM Monitoring, Recordkeeping and Reporting

All Fuel Burning Equipment

59. Visible Emissions Monitoring.

When operating for more than 400 hours per source in any calendar year, the permittee shall observe the exhaust of Source ID(s) 1 - 7 for visible emissions using the Method 9 Plan under condition 59.1.

[18 AAC 50.350(g), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

59.1 Method 9 Plan.

For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

- a. First Method 9 Observation. Observe exhaust for 18 minutes within the first 30 days of operation after 400 hours of operation on liquid fuel in any calendar year.
- b. Monthly Method 9 Observations. After satisfying 59.1a, for any month the source operates equal to or more than 12 hours then perform an 18 minute observation during the following calendar month. If the source does not operate 12 hours in that following month, then perform the 18-minute observation during the next calendar month the source does operate for 12 hours or more. There shall be only three monthly observations per source under this condition.
- c. Semiannual Method 9 Observations. After satisfying 59.1b, perform an 18-minute observation during any calendar month in the next consecutive 6-month period if the source continues to operate at least 12 hours in each month of the 6 month cycle. Complete two observations under this schedule, and each observation must be during the second, third or fourth month of each six-month cycle. If the source exhibits a six-minute average greater than 15 percent and one or more observations are greater than 20 percent, observe emissions in accordance with 59.1e.
- d. Annual Method 9 Observations. After satisfying 59.1c, perform an 18-minute observation during the next 12-month period if the source continues to operate at least 12 hours in any calendar month of the 12-month cycle. Complete a single observation each 12-month cycle, and each observation must be during the fourth, fifth, sixth, seventh, eighth or ninth month of each 12 month cycle. If the source exhibits a six-minute average greater than 15 percent during and one or more observations are greater than 20 percent, then comply with 59.1e.

-
- e. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that source to monthly observations in accordance with condition 59.1b, until the criteria in condition 59.1c for semiannual monitoring are met.

60. Visible Emissions Recordkeeping.

The permittee shall keep records in accordance with this condition.

[18 AAC 50.350(h), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

60.1 the observer shall record

- a. the name of the facility, emissions source and location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in this Section;
- b. the time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;
- c. the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
- d. opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Record in this Section; and
- e. the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

60.2 To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet;

- a. calculate and record the highest 18-consecutive-minute average observed.

61. Visible Emissions Reporting.

The permittee shall report in each facility operating report under condition number 49, visible emissions as follows:

61.1 for each source under the Method 9 Plan,

- a. copies of the observation results (i.e. opacity observations) for each source that used the Method 9 Plan, except for the observations the permittee has already supplied to the department; and
- b. a summary to include:
 - (i) number of days observations were made;
 - (ii) highest six-minute average observed; and
 - (iii) dates when one or more observed six-minute averages were greater than 20 percent;

61.2 a summary of any monitoring or record keeping required under condition 59 and 60 that was not done;

61.3 report as excess emissions or permit deviation under condition 47:

- a. the results of Method 9 observations that exceed an average 20 percent for any six-minute period; and
- b. if any monitoring under condition 59 was not performed when required, report within three days of the date the monitoring was required.

[18 AAC 50.350(g) – (i), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

Particulate Matter from Diesel Engines and Liquid Fired Turbines (Source IDs 1 – 5)

62. Particulate Matter Monitoring.

The permittee shall conduct source tests on diesel engines and liquid-fired turbines, Source IDs 1 – 5, if operated over 400 hours per calendar year, to determine the concentration of particulate matter (PM) in the exhaust of a source in accordance with this condition 62.

[18 AAC 50.346(c), 5/3/02]

62.1 Within six months of exceeding the criteria of condition 62.2a or 62.2b, either

- a. conduct a PM source test according to conditions 35-42; or
- b. make repairs so that emissions no longer exceed the criteria of condition 62.2; to show that emissions are below those criteria, observe emissions as described in condition 59.1 under load conditions comparable to those when the criteria were exceeded.

62.2 Conduct a source test or repairs according to condition 62.1 if

- a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or

-
- b. for a source with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the department has waived this requirement in writing.

62.3 During each one hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one hour test run. Submit a copy of these observations with the source test report.

62.4 The automatic PM source test requirement in condition 62.1 and 62.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

63. Particulate Matter Record Keeping.

Within 180 calendar days after the effective date of this permit, the permittee shall record the exhaust stack diameter(s) of Source ID(s) 1 – 5. Report the stack diameter(s) in the next operating report under condition 49.

[18 AAC 50.346(c), 5/3/02]

64. Particulate Matter Reporting.

The permittee shall report as follows:

[18 AAC 50.350(i), 1/18/97 & 50.346(c), 5/3/02]

64.1 report under condition 47

- a. the results of any PM source test that exceeds the PM emissions limit; or
- b. if one of the criteria of condition 62.2 was exceeded and the permittee did not comply with either condition 62.1a or 62.1b, this must be reported by the day following the day compliance with condition 62.1 was required;

64.2 report observations in excess of the threshold of condition 62.2b within 30 days of the end of the month in which the observations occur;

64.3 in each facility operating report under condition 49, include

- a. the dates, source IDs, and results when an observed 18-minute average was greater than an applicable threshold in condition 62.2;
- b. a summary of the results of any PM testing under condition 62; and

-
- c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of condition 62.2, if they were not already submitted.

Particulate Matter from Boilers and Heaters (Source IDs 6 & 7)

65. Particulate Matter Monitoring.

If operated for more than 400 hours per calendar year and more than 12 hours per month on liquid fuel, the permittee shall conduct source tests on Source IDs 6 and 7 to determine the concentration of PM in the exhaust of Source IDs 6 and 7 as follows:

- 65.1 If corrective maintenance performed within the first 180 days of exceeding the visible emissions standard in Condition 3, as observed under Condition 59.1, fails to eliminate visible emissions greater than 20 percent opacity, conduct a PM source test according to the requirements set out in Section 9 within 90 days. To show that the emissions are below the 20% opacity criteria, observe emissions as described in condition 59.1 under load conditions comparable to those when the criteria was exceeded.
- 65.2 During each one hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one hour test run. Submit a copy of these observations with the source test report.
- 65.3 The PM source test requirement in condition 6.5 is waived for an emission unit if:
 - a. a PM source test on that unit has shown compliance with the PM standard during this permit term, or
 - b. if a follow-up visible emission observation conducted using Method-9 during the 90 days shows that the excess visible emissions described in condition 65.1 no longer occur.

[18 AAC 50.350(g) – (h), 1/18/97]

66. Particulate Matter Record Keeping.

- 66.1 The permittee shall keep records of the results of any PM testing and visible emissions observations conducted under conditions 65.1 and 65.2.

[18 AAC 50.350(g) – (h), 1/18/97]

67. Particulate Matter Reporting. The permittee shall report as follows:

67.1 In each facility operating report required by Condition 49, include:

- a. The dates, Source ID(s), and results when an 18-minute opacity observation was greater than the applicable threshold criterion in 65.1.
- b. A summary of the results of any PM testing and visible emissions observations conducted under conditions 65.1 and 65.2.

67.2 Report excess emissions, in accordance with Condition 47, any time the results of a source test for PM exceeds the PM emission limit stated in Condition 4.

[18 AAC 50.350(i), 1/18/97]

Section 14. Visible Emission Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company: _____

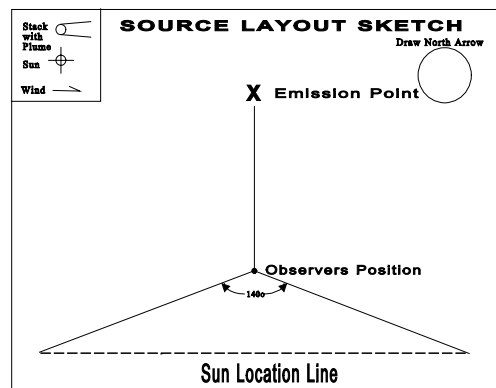
Location: _____

Test No.: _____ Date: _____

Source: _____

Production Rate, Operating Rate &
Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location					
Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions					
Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description:					
Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Page ____ of ____

Test Number _____ Clock time _____

[illegible]

Observer Signature _____

Number of Observations exceeding 20% _____

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 15. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

Alyeska Pipeline Service Company

Company Name

Pump Station 12 (PS-12)

Facility Name

Reason for notification:

☐ **Excess Emissions**

If you checked this box

Fill out section 1

☐ **Other Deviation from Permit Condition**

If you checked this box

fill out section 2

When did you discover the Excess Emissions or Other Deviation:

Date: __/__/__ Time: __:__

Section 1. Excess Emissions

1. Event Information (Use 24-hour clock):

	START Time: (hr:min):	END Time:	Duration
Date: _____	_____:	_____:	_____:
Date: _____	_____:	_____:	_____:
		Total:	_____:

2. Cause of Event (Check all that apply):

<input type="checkbox"/> START UP	<input type="checkbox"/> UPSET CONDITION	<input type="checkbox"/> CONTROL EQUIPMENT
<input type="checkbox"/> SHUT DOWN	<input type="checkbox"/> SCHEDULED MAINTENANCE	<input type="checkbox"/> OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

3. Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

4. Emission Limit Potentially Exceeded

Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.

Permit Condition	Limit	Emissions Observed
_____	_____	_____
_____	_____	_____

5. Excess Emission Reduction:

Attach a description of the measures taken to minimize and/or control emissions during the event.

6. Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

7. Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?

☐ YES ☐ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235?

☐ YES ☐ NO

Section 2. Other Permit Deviations

(a) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(b) Permit Condition Deviation:

Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.

Permit Condition	Potential Deviation
_____	_____
_____	_____
_____	_____

(c) Corrective Actions:

Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name:

Signature:

Date

Alaska Department of Environmental Conservation

Air Permits Program

March 5, 2003

Alyeska Pipeline Service Company

Pump Station 12 (PS-12)

STATEMENT OF BASIS

for the terms and conditions of

Permit No. 081TVP01

Prepared by Christian Beaudrie

INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of Operating Permit No. 081TVP01. The “Statement of Basis” only serves to provide background information regarding the terms and conditions contained the Operating Permit No. 081TVPO1. This document does not create nor impose any requirements on the permittee.

Pump Station 12 is a crude oil pipeline pumping facility. The purpose of Pump Station 12 is to support the transportation of crude oil by TAPS. The operation of Pump Station 12 is supported by several auxiliary activities due to its remote location, including electric power generation, personnel facilities, and other maintenance and support facilities. Solid waste produced at the station is burned in an on-site incinerator.

FACILITY IDENTIFICATION

Section 1 contains information on the facility as provided in the title V permit application. The facility is owned by Amerada Hess Pipeline Corp., BP Pipelines (Alaska) Inc., ExxonMobil Pipeline Company, Phillips Alaska Transportation, Inc., Unocal Pipeline Company, and Williams Alaska Pipeline Company, LLC. Alyeska Pipeline Service Company is the operator of the facility and is the permittee for the facility’s operating permit.

SOURCE INVENTORY AND DESCRIPTION

As provided in the application, the facility contains the following regulated sources: five liquid fuel fired turbines for pumps and generators, two diesel fired heaters, and a solid waste incinerator. The majority of the sources at the facility were installed prior to 1977.

The sources at the facility regulated Operating Permit No. 081TVP01 are identified and described in Table 1 in Section 3 of the permit. The table is provided for information and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

Table 1 contains emission information as provided in the application. A summary of the potential to emit (PTE) from the Pump Station 12 (PS-12) is shown in the table below.

Table A - Emissions Summary, in Tons Per Year (tpy)

Pollutant	NO _x	CO	PM-10	SO ₂	VOCs	Total
PTE	1,196	458.0	94.8	577.5	38.6	2365
Assessable PTE	1,196	458.0	94.8	577.5	38.6	2365

The assessable PTE listed under condition 1.1 is the sum of the emissions of each individual regulated air contaminant for which the facility has the potential to emit quantities greater than 10 tpy. The emission estimates are based upon on former 18 AAC 50.400 AQC Permit to Operate No. 9572-AA003. HAP emissions were calculated using GRI HAP-Calc v.3.01 software. The VOCs at this facility consist of 4.2 tons per year of Hazardous Air Pollutants and 34.4 tons per year of non-hazardous volatile organic compounds. Other HAP emissions consist of 3.5 tons per year of HCl, not counted in the total potential to emit calculations.

The emissions listed in Table A are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit for the facility.

BASIS FOR REQUIRING AN OPERATING PERMIT

Section 2 includes a description of the regulatory classifications of the Pump Station 12 (PS 12). This facility requires an operating permit under 18 AAC 50.325(b)(1) because it has the potential to emit 100 tons per year (tpy) or more of a regulated air contaminant. The facility also requires an operating permit under 18 AAC 50.325(b)(3) because it contains sources subject to federal NSPS standards adopted by reference in 18 AAC 50.040(a) – (c).

Alaska regulations require operating permit applications to include identification of “regulated sources.” As applied to PS 12 the state regulations require a description of:

- ⇒ Each incinerator, including a demonstration showing each requirement in 18 AAC 50.050, Incinerator Emissions Standards, that applies, under 18 AAC 50.335(e)(4)(A);
- ⇒ Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment, under 18 AAC 50.335(e)(4)(C);
- ⇒ Each source subject to a standard adopted by reference in 18 AAC 50.040 under 18 AAC 50.335(e)(2); and
- ⇒ Sources subject to requirements in an existing department permit 18 AAC 50.335(e)(5).

The emission sources at PS 12 are classified as “regulated sources” according to the above department regulations are listed in Table 1 Operating Permit No. 081TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The most recent permit issued for this facility is permit-to-operate 9572-AA003. The permit was last amended on December 4, 1998 by Construction Permit No. 9872-AC030. All facility-specific requirements established in this previous permit are included in the new operating permit as described in Table C.

Construction Permits

Construction Permit No. 9872-AC030 was issued to this facility on December 4, 1998. The construction permit has been incorporated into the operating permit as described in Table C.

Title-V Operating Permit Application History

The owner or operator submitted an application on October 31, 1997.

The owner or operator amended this application on December 5, 1997, January 28, 1998, and March 6, 2000.

The owner or operator submitted an application for a modification to the former 18 AAC 50.400 AQC Permit to Operate No. 9572-AA003. This previous permit was modified through the issuance of a construction permit, number 9872-AC030 on December 4, 1998.

COMPLIANCE HISTORY

The facility has operated at its current location since 1977. Review of the permit files for this facility, which includes the past inspection reports indicate a facility generally operating in compliance with its operating permit. The requirements of a Compliance Order By Consent (COBC) 90-2-4-5-262-1 issued in 1990 for PS12 and other pipeline facilities has been implemented in each permit since 1990. The permittee appears to be in compliance with the requirements of this COBC for the PS12 facility.

FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) require that an operating permit include each facility-specific requirement established in a prior Air Quality Control Permit. Table C below lists the Air Quality Control permit condition that established a requirement in Air Quality Control Permit No. 9572-AA003 and the new condition Operating Permit No. 081TVP01 that carries the old requirement into the new permit.

Table C - Comparison of Pre-January 18, 1997 Permit No. 9572-AA003 Conditions to Operating Permit No. 081TVP01 Conditions⁹

Permit No. 9572-AA003 Condition number	Description of Requirement	Permit No. Operating Permit No. 081TVP01 Condition Number	How condition was revised
Introductory Text	No requirements within introductory text.	None	Old introductory text replaced by new text.
Exhibit A	Listing exemption for sources rated <1 MMBtu/hr	None	Replaced by Section 7, Insignificant sources
1	Comply with ambient air quality standards	None	Now required only for construction permits.
2 and Exhibit B	Comply with most stringent emission standards, limits, &	Conditions 3 through 12	Emission limits unchanged and now listed as conditions

⁹ This table does not include all standard and general conditions

Permit No. 9572-AA003 Condition number	Description of Requirement	Permit No. Operating Permit No. 081TVP01 Condition Number	How condition was revised
	specifications		
3	Provide optimum control of emission	25	Same information, different format
4	No modification w/o notification	None	No authority
5	Refers to Exhibit B	None	No need for the reference
6	Liquid fuel sulfur content may not exceed 0.24 percent by weight.	5.1	Revised w/Same limits
7	Rim-cooling conditions	12.4	Same information as in previous permit.
8 - 12	Source Testing Requirements	Section 9	Old permit terms are superceded by new rulings for source testing requirements.
13	Process monitor requirements.	6 and 9	Revised w/Same requirements
14	Determination of sulfur content	5	Revised w/Same requirements
15	Avon generator operation parameter recording	9	Same information as in previous permit.
Exhibit B for NO _x standard	NO _x concentration limit for Avon generators.	10	Same information as in previous permit.
16	Calculate the increase in NO _x from the Avon Generators on a monthly basis.	12.3	Revised w/Same requirements
17	Report to department when increase in NO _x emissions from Avon Generators reaches 35 tons each year.	12.5	Same information as in previous permit.
Exhibit D Facility Operating Report Requirements #5a - f	NO _x emissions reporting	12	Same information as in previous permit.
18	Calculate the total quantity of sulfur dioxide emitted from the facility each month and report to the department.	6	Same information as in previous permit.
Exhibit D – Facility Operating Report Requirements #6a-b	SO _x emissions reporting	6	Same information as in previous permit.
19, 20	Reporting of Excess Emissions	47	Revised to reflect current excess emission standard condition.
21	Facility access	57	Revised w/Similar Requirements
22-25	Operating report	49	Revised w/Similar Requirements
26, 27, 29	One time source testing requirements	None	No longer required
28	Annual source testing on rim-cooled Avon Gas Generators.	12.7	Revised. Annual source testing has been relaxed to biannual source testing triggered only when the Avon Generator with

Permit No. 9572-AA003 Condition number	Description of Requirement	Permit No. Operating Permit No. 081TVP01 Condition Number	How condition was revised
			rim-cooling is operated above 7,500 RPM on a given day.
1 st paragraph, Exhibit B	Explanatory paragraph	Section I	Shortened & Revised
Exhibit D, items 7 & 8	Excess emissions & authorized signature	44, 47, 49	These will become standard conditions
Exhibit B – Part A. Operational Limitations	Combined Avon Gas Generator Fuel Consumption Limits.	9	These requirements were combined with the fuel use requirements for Avon Generators of Exhibit C, Part I, to more accurately reflect the limitations and requirements for source IDs 1 – 3. Same information as in previous permit but with a different format.
Exhibit D – For fuel consumption - # 3a-c	Fuel consumption reporting	3.3, 5.2(a), 6, and 9	Same information as in previous permit, different format.
Exhibit B – Part B. Particulate Matter	20% Opacity not to be exceeded more than 3 minutes in any one hour not to exceed 0.05 gr/dscf	3 and 3.1a	Same information as in previous permit, different format.
Exhibit B – Part C. Oxides of Nitrogen	NO _x emission limitations for Avon Generator operations at 7,500 rpm, and between 7,501 and 7,900 rpm.	10	Same information as in previous permit.
Exhibit B – Part E. Sulfur Dioxide	500 ppmv not to be exceeded when averaged over any 3 consecutive hours.	5	Same information, different format
Exhibit C – Part I - Fuel Oil	Required testing method for determining sulfur content of fuel oils.	5.2	Same information, different format
Exhibit C – Part I - Fuel Use	Requirements for a continuous monitoring system for fuel consumption by Avon Generators.	9	These requirements were combined with the fuel limitations for Avon Generators of Exhibit B to more accurately reflect the limitations and requirements for source IDs 1 – 3. Same information, different format.
Exhibit C – Part II – Continuous Emission And Process Monitoring Requirements –	Alternate Monitoring Plan (AMP) for NO _x	12	Same information, different format.

LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

Legal Basis: The state and federal regulations for each condition are cited Operating Permit No. 081TVP01.

Conditions 1 - 21.2, Fee Requirements

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the permittee to pay fees in accordance with the department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air contaminant authorized by the permit (AS 46.14.250(h)(1)(A)). Air contaminant means any regulated air contaminant and any hazardous air contaminant. Therefore, assessable emissions under 18 AAC 50.250(h)(1)(A) means the potential to emit any air contaminant identified in the permit, including those not specifically limited by the permit

The conditions also describe how the permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air contaminant. Therefore, fees based on actual emissions must also be paid on any contaminant emitted in excess of 10 tpy whether or not the permit contains any limitation of that contaminant.

If the permittee does not choose to annually calculate assessable emissions, emissions fees will be based on "potential to emit" (PTE). The PTE set forth in the condition is based on a fuel sulfur content of 0.24% by weight.

Conditions 3, 4 and Section 13, Visible Emissions and PM Monitoring Plan

Applicability: Applies because these conditions detail the monitoring, recordkeeping, and reporting required in conditions 3 and 4.

Factual Basis: Conditions 3.1a and 4 require that the permittee comply with the visible emission and particulate standard of 18 AAC 50.055. The permittee shall not cause or allow the equipment to violate these standards. To ensure compliance, the permittee is required to monitor emissions for the liquid fired fuel burning equipment operated over 400 hours per calendar year in accordance with the visible emissions and PM monitoring plan contained in Section 13. This requirement also contains the Air Quality Control Permit No. 9572-AA003 requirement to monitor and report equipment operating hours for Source IDs 1-7.

The Particulate Matter monitoring, recordkeeping, and reporting conditions for diesel fired heaters and boilers has been written as facility specific requirements that are similar to the PM standard condition requirements for diesel turbines and engines. The intent of these conditions is to require periodic monitoring, recordkeeping, and reporting, for Source IDs 6 and 7 in accordance with 18 AAC 50.350 (g) – (i).

For Sources ID 1 to 7, visible and PM emissions monitoring is waived in accordance with recently issued Department Guidance AWQ 02-014 as long as the units are not operated

more than 400 hours per calendar year on liquid fuel. The permittee is not required to start-up a source on liquid fuel for the sole purpose of conducting a visible emissions observation.

Condition 5, Sulfur Compound Emissions

Applicability: The sulfur emission standard applies to operation of all fuel-burning equipment in the State of Alaska. Source IDs 1 - 7 are fuel-burning equipment. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October, 1983. Monitoring of sulfur dioxide emissions is accomplished by analysis of fuel sulfur content.

Factual basis: The condition requires the permittee to comply with the sulfur emission standard applicable to fuel-burning equipment. The permittee may not cause or allow their equipment to violate this standard.

Monitoring – Diesel Fuel (Fuel Oil) sulfur is measured in weight percent sulfur (wt% S). Calculations show that fuel containing no more than 0.75 wt% S will always comply with the emission standard. This is true for all liquid hydrocarbon fuels, even with no excess air. The permittee is limited to a maximum fuel sulfur content of 0.24%. Compliance with the fuel sulfur limit will ensure compliance with the SIP standard for sulfur dioxide.

Recordkeeping – Keep records of the fuel sulfur content for each fuel shipment or monitor the sulfur content in the facility's fuel storage tanks.

Reporting – Report excess emissions in accordance with condition 47, and include copies of the records required within this condition with the facility operating report required under condition 49.

Condition 6, Sulfur Dioxide Emissions

Applicability: This condition has been carried forward from Air Quality Control Permit No. 9572-AA003. This condition also contains the Air Quality Control Permit No. 9572-AA003 requirement to monitor fuel consumption for Source IDs 1-7. The fuel consumption for Source IDs 4-7 may be estimated based upon firing time and burner rating instead of the use of fuel meters. The total monthly fuel consumption values for Source IDs 1-7 and the fuel sulfur monitoring results of condition 5 are used to calculate the facility's monthly sulfur dioxide emissions.

Factual Basis: The monthly sulfur dioxide emissions from the facility shall be reported in the facility operating report required by condition 49.

Condition 7, Incinerator Visible Emissions

Applicability: This visible emission standard of 18 AAC 50.050(a) applies to the incinerator located at the facility.

Factual Basis: The condition requires the permittee to comply with the visible emission standard applicable to incinerators. The permittee may not cause or allow their incinerator to violate this standard.

The permittee is required to monitor, record and report according to Condition 7.1. The permittee is not required to monitor particulate matter because there is no particulate matter emission standard for incinerators with a rated capacity of less than 1000 pounds per hour.

Condition 8, Hospital/Medical/Infectious Waste Incineration

Applicability: 40 CFR 60 Subpart Ce applies to each incinerator that was constructed prior to June 20, 1996 that burns Hospital/Medical/Infectious Waste.

Factual Basis: The solid waste incinerator located at PS 12 occasionally burns small quantities of hospital/medical/infectious wastes. The permittee has notified the federal Administrator of an exemption claim pursuant to 40 CFR 60.32e(c) and 40 CFR 62.144000(c). For the exemption claim to continue to apply, the permittee must maintain records demonstrating that the total quantity (pounds) of medical/infectious wastes burned does not exceed 10 percent of the total waste (pounds) incinerated on a calendar quarter basis.

Condition 9, Avon Gas Generator Fuel Limits and Monitoring Requirements

Applicability: This condition has been carried forward from Air Quality Control Permit No. 9572-AA003.

Factual Basis: The fuel consumption limits for the three Avon Gas Generators are described in this condition. The monitoring of fuel consumption for these units shall be carried out by use of a continuous system for recording and monitoring fuel consumption for each unit. In the event of a fuel meter malfunction, the fuel consumption shall be calculated as outlined in this condition.

In addition, new quality control and quality assurance requirements have been incorporated to require that the permittee verify the accuracy and precision of the monitors used for Avon Gas Generator fuel consumption and speed, and ambient temperature. If the monitors are found to be out of the specified ranges, the permittee must initiate corrective action. If the Avon gas generators are infrequently operated (less than 1000 hours per calendar year) the requirement to verify the accuracy of the monitors is waived.

Condition 10, Avon Gas Generator NO_x emission limits

Applicability: This condition has been carried forward from Air Quality Control Permit No. 9572-AA003.

Factual Basis: This condition establishes the baseline NO_x limit at 7,500 rpm (140 ppm) used to calculate the incremental increase in NO_x mass emissions when the Avon Gas Generators (Source IDs 1-3) are operated between 7,501 rpm and 7,900 rpm as described in condition 12.3. The operation of the Avon Gas Generators is restricted to 161 ppm when operated between 7,501 rpm and 7,900 rpm.

Conditions 11 and 12, Avon Gas Generator NO_x Emission Monitoring

Applicability: These conditions have been carried forward from Air Quality Control Permit No. 9572-AA003.

Factual Basis: These conditions established the monitoring criteria that the permittee must follow to monitor and report NO_x emissions for the turbines equipped with “rim cooling.” These requirements include the use of an Alternative Monitoring Plan (AMP) for NO_x that calculates NO_x emissions based upon turbine speed and ambient temperature, which the permittee is required to monitor and record every 30 minutes. The results of the NO_x monitoring are used to calculate the incremental increase in NO_x mass emissions above the facility’s baseline (allowable) NO_x emission level that is based upon all three turbines (Source IDs 1-3) operating at 7500 rpm. The incremental increase in NO_x emissions from the Avon Gas Generators is limited to 39.9 tons per year. The permittee is required to report when the incremental increase in NO_x emissions reaches 35 tons and to restrict operations to ensure that the limit is not exceeded. Historical operation of Source IDs 1-3 show that the turbines are operated significantly below the baseline emission levels.

Condition 12.4 restricts the addition of “rim cooling” to one unit. Condition 12.7 requires that the permittee verify the accuracy of the AMP equation by performing on-site emission testing of the “rim-cooled” turbine and comparing the results to those predicted by the AMP.

At the time of permit issuance, none of the mainline unit turbines were equipped with rim cooling. Rim cooling had been removed from unit no 3 on December 29, 2002.

Condition 13, Turbine Relocations

Applicability: The turbine engines are removed from their operating locations periodically for maintenance and a turbine engine from the TAPS inventory of the same turbine engine family is substituted as a replacement. The equipment powered by the turbine engine (such as the pump or the electric generator) remains in place. Most of the turbines were manufactured and began operation on the TAPS prior to October 3, 1977, the applicability date for NSPS Subpart GG. The permittee received a letter from EPA dated August 1, 2002 that concurred the practice of relocating turbine engines to existing turbine locations did not constitute a “commenced construction” under 60 CFR 52.21(b) or 40 CFR 60.2. To ensure that future turbine engine changes do not result in a “modification” or a “reconstruction” as defined under 40 CFR 60, the permittee is required to maintain maintenance records and to report under condition 49 the relocation and replacement of the turbines.

Factual basis: This condition requires monitoring, recordkeeping, and reporting to document the relocation and replacement of existing turbines from the pool does not constitute a “modification” or “reconstruction,” as those terms are defined in 40 CFR 60 Subpart A.

Condition 14, Turbines Subject to NSPS Subparts A and GG

Applicability Avon Gas Generator (Source ID 3) turbine position is equipped with “rim-cooling” and is subject to 40 CFR 60 Subparts A and GG (NSPS) requirements. The permittee has requested concurrence from EPA that the addition of “rim-cooling” did not constitute a modification under 40 CFR 60.14 and that the source is not subject to 40 CFR 60 Subpart A and GG requirements. Until EPA makes a determination that that the addition of “rim-cooling” did not constitute a 40 CFR 60.14 modification, the permittee is required to comply with the NSPS requirements.

Factual Basis: Condition 14 contains the on-going NSPS requirements that the permittee must comply with including a NO_x limit of 161 ppm (ISO conditions, 15% O₂) and a fuel sulfur limit of 0.8% by weight.

General Discussion -

NO_x Standard: For a turbine subject to 40 C.F.R. 60.332, the NO_x standard is determined by the following equation [40 CFR 60.332(a)(2)]:

$$STD_{NOX} = 0.015(14.4 / Y) + F$$

where,

STD_{NOX} = allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis)

Y = manufacturer's maximum rated heat input (kJ/W-hr), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the affected facility. The value of Y shall not exceed 14.4 kJ/W-hr

F = NO_x emissions allowance for fuel bound nitrogen, percent by volume, **assumed to be zero for Alaska fuel.**

For the Avon gas generator(s): Liquid Fired:

Heat Input (LHV) = 177 MMBtu/hr (52 MW) @ 7900 rpm

Output: 18,700 BHP (13.9 MW) @ 7900 rpm

$$\begin{aligned} Y &= (177,000,000 \text{ Btu/hr})(1.05506 \text{ KJ/Btu}) / (18,700 \text{ BHP})(745.7 \text{ W/HP}) \\ &= 13.392 \text{ (use 13.4)} \end{aligned}$$

$$STD_{NOX} = 0.015(14.4 / Y) + F = 0.015(14.4/13.4) + 0 = 0.0161 \text{ vol\%} = \mathbf{161 \text{ ppmv}}$$

SO₂ Standard: The permittee is required to comply with on or the other of the following sulfur requirements for Source ID 3:

- (1) do not cause or allow SO₂ emission in excess of 0.015 percent by volume, at 15 percent O₂ and on a dry basis (150 ppmvd), or
- (2) do not cause or allow the sulfur content for the fuel burned in Source ID(s) to exceed 0.8 percent by weight .

**Conditions 15, NO_x Monitoring, Recordkeeping, and Reporting for Turbines
Subject to Condition 14**

Applicability: These requirements include the submittal of any waivers received from EPA and the state-only requirements for on-going NO_x monitoring of NSPS subject turbines.

Factual Basis: This condition requires that the permittee provide the department any waivers from EPA obtained during the permit term. Additionally, this condition specifies the type of periodic NO_x monitoring that is required to demonstrate compliance with the NSPS

NO_x limit. Since the permittee is already required to monitor and report NO_x emissions in accordance to conditions 11 and 12, no additional NO_x monitoring required.

Conditions 17 – 18, Alternative Operating Rampdown Mode

Legal Basis: These conditions have been requested by the permittee for PS-12. The conditions define the monitoring, recordkeeping and reporting requirements for PS-12 during periods when the station is operating in an alternative ‘rampdown’ mode.

Factual basis: The Rampdown Mode means the period that the crude oil mainline turbine pumps (Avon Gas Generators) are no longer required to operate to transport oil down TAPS. During the Rampdown Mode the Avon Gas Generators (Source IDs 1-3) are not operated, however, other permitted sources may be operated as required to maintain the integrity of the station.

Sources that are not operated during the Rampdown Mode are exempted from all monitoring, recordkeeping, and reporting requirements contained in the permit except as required in condition 18. Sources that are operated during the Rampdown Mode are required to comply with the all other applicable sections of the permit.

Condition 19.1 – 19.4, Insignificant Source Reporting

Applicability: These general emission standards apply to all industrial processes fuel-burning equipment, and incinerators regardless of size.

Factual Basis: The insignificant sources section of the permit replaces the 1 MMBtu/hr source exemption of former permits. 18 AAC 50.365(b) requires no notification when adding insignificant sources to the facility. The regulations require the permittee to report if an insignificant source becomes significant and certify that their insignificant sources comply with applicable requirements. Insignificant sources must comply with the air pollution prohibitions. These conditions restate the regulatory requirement.

Conditions 19 - 22, Insignificant Sources

Applicability: These general emission standards apply to all industrial processes fuel-burning equipment, and incinerators regardless of size.

Factual basis: These are general emission standards which apply to all industrial processes fuel-burning equipment, and incinerators regardless of size. The conditions re-iterate the general standards and require compliance for insignificant sources. The permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The department finds that the insignificant sources at this facility do not need specific monitoring, recordkeeping and reporting to ensure compliance.

Condition 23, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 24, Refrigerant and Halocarbon Recycling and Disposal

Applicability: Applies if the permittee engages in the use of or recycling or disposal of certain refrigerants and Halon. The permittee is subject to the requirements of 40 CFR 82 because the permittee operates and maintains systems that contain refrigerant(s) and Halon.

Factual basis: These conditions reference the applicable 40 CFR 82 requirements. The permittee may not cause or allow violations of these prohibitions. No additional MR&R requirements are required to ensure compliance with these federal requirements.

Condition 25, Good Air Pollution Control Practice

Applicability: Applies to all sources except for sources or activities regulated under 40 CFR Part 60, 61, 63 and 82.

Factual basis: Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly, and periodic monitoring that is not continuous would be needed much more frequently to be sure that it is representative.

Records should be kept and available to the department. Records of deferred maintenance may be a reasonable trigger for requesting source testing.

For most existing equipment, the department does not specify that the permittee must follow manufacturer's recommendations. If the manufacturer's recommendations are not suitable for Alaskan conditions, or do not relate to minimizing emissions, the permittee can see that they are changed as a condition of purchase for existing equipment. The requirement for complying with manufacturer's recommendations or with a specific operation and maintenance (O & M) plan is included for control equipment because the efficient operation of control equipment directly relates to emissions, and the department does not anticipate that Alaskan conditions will require drastically different O & M procedures.

It is not the department's intent in specifying manufacturer's recommendations to include those that endorse only the manufacturer's line of replacement parts. The condition states that any suitable replacement parts or equipment can be used.

Condition 25.b requires the permittee to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the department. The department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 25.c requires that the permittee keep copies of the facility's maintenance procedures for the facility operations. This condition takes into consideration the nature of the permittee's maintenance program, which is procedure based with schedules undergoing

frequent changes. Instead of requiring the permittee to keep a copy of the maintenance procedures on site, a copy of the current procedures schedule shall be submitted when requested by the department.

This condition does not apply to sources subject to 40 CFR Part 60, Subpart GG, and 40 CFR Part 61, subpart M.

Condition 26, Dilution

Applicability: This state regulation applies to the permittee because the permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

Condition 27, Reasonable Precautions to Prevent Fugitive Dust

Applicability: Applies to the permittee because the permittee will engage in industrial activity at the facility.

Factual Basis: The condition restates the regulatory prohibition on fugitive dust. This prohibition calls for reasonable precautions to be taken to prevent particulate matter from being emitted into the ambient air while engaged in industrial activities.

Condition 28, Stack Injection

Applicability: Stack injection requirements apply to the facility because the facility contains a stack or source constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 29, Open Burning

Applicability: The open burning state regulation in 18 AAC 50.065 applies to the permittee if the permittee conducts open burning and firefighter training at the facility.

Factual Basis: The condition requires the permittee to comply with the regulatory requirements when conducting open burning and firefighter training at the facility.

Condition 30, Air Pollution Prohibited

Applicability: These state regulations apply because the permittee is subject to the requirements in 18 AAC 50.

Factual Basis: The underlying regulations are 18 AAC 50.110 and 18 AAC 50.346. The department will use these standard conditions in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Condition 31, Technology-Based Emission Standard

Applicability: Technology Based Emission Standard requirements apply to the facility because the facility contains equipment subject to a technology-based emission standard, such as BACT, MACT, NSPS or other “technologically feasible” determinations..

Factual Basis: The permittee is required to take reasonable steps to minimize emissions if certain activity causes exceedance of any technology-based emission standard in this permit. The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with condition 47. Excess emission reporting under condition 47 requires information on the steps taken to minimize emissions, the report required under condition 47 is adequate monitoring for compliance with this condition.

Condition 32, Permit Renewal

Applicability: Applies if the permittee intends to renew the permit.

Factual Basis: The permittee is required to submit a complete application for permit renewal by the specific dates applicable to Pump Station 12 (PS-12) as listed in this condition. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal. No additional requirements are necessary to ensure compliance with this condition.

Condition 33, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: The permittee is required to conduct source tests as requested by the department. Monitoring consists of conducting the requested source test, and no recordkeeping or reporting requirements are necessary to ensure compliance with this condition.

Conditions 34 - 36, Operating Conditions, Reference Test Methods, Excess Air Requirements

Applicability: Applies because the permittee is required to conduct source tests by this permit.

Factual Basis: The permittee is required to conduct source test as set out in Conditions 34 - 36. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. The test reports required by condition 40 adequately monitor compliance with Conditions 34 - 36, therefore no additional MR&R requirements are necessary to ensure compliance with these conditions.

Conditions 37 - 40, Test Plans, Notification & Reports

Applicability: Apply because the permittee is required to conduct source test by this permit.

Factual Basis: Standard condition 18 AAC 50.345(a)(10) is incorporated through these three conditions. Because this standard condition supplements specific monitoring

requirements stated elsewhere in this permit, no MR&R is required. The source test itself is adequate to monitor compliance with this condition.

Condition 41, Test Exemption

Applicability: Applies when the source exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), 5/03/02, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Condition 42, Particulate Matter (PM) Calculations

Applicability: Applies when the permittee tests for compliance with the PM standard.

Factual Basis: The condition incorporates a methodology for PM source tests. The permittee must use the equation given in this condition to calculate the PM emission concentration from the source test results. Because this condition supplements specific monitoring requirements stated elsewhere in this permit, no MR&R is required to ensure compliance with this condition.

Condition 43, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the permittee to submit reports.

Factual Basis: This condition requires the permittee to certify all permit required reports submitted to the department. To ease the certification burden on the permittee, the condition allows the excess emission reports to be **certified** with the facility report, even though it must still be **submitted** more frequently than the facility operating report. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

Condition 44, Submittals

Applicability: Applies because the permittee is required to send reports to the department.

Factual Basis: This condition requires the permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

Condition 45, Information Requests

Applicability: Applies to all permittees, and incorporates a standard condition

Factual Basis: This condition incorporates a standard condition in regulation, which requires the permittee to submit information requested by the department. Receipt of the requested information is adequate monitoring.

Condition 46, Recordkeeping Requirements

Applicability: Applies because the permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional MR&R is required.

Condition 47, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The condition does not mandate the use of the department's reporting form, but it does specify that the information listed on the form must be included in the report.

The reports themselves and the other monitoring records required under this permit provide an adequate monitoring of whether the permittee has complied with the condition.

Therefore, no additional MR&R is necessary to ensure compliance with this condition.

Please note that there may be additional federally required excess emission reporting requirements.

Condition 48, NSPS and NESHAP Reports

Applicability: Applies to facilities subject to NSPS, NESHAPs, or MACT federal regulations under 40 CFR Parts 60, 61, or 63.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60, 40 C.F.R. 61, and 40 C.F.R. 63. The permit does not need any MR&R. The reports themselves are adequate monitoring for compliance with this condition.

Condition 49, Facility Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit and does not need any MR&R. The reports themselves are adequate monitoring for compliance with this condition.

Condition 50, Annual Compliance Certification

Applicability: Applies to all permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no MR&R is needed. The due date for this report has been extended from February 1 to March 1 as requested.

Conditions 51 - 57, Standard Conditions

Applicability: Applies because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions required for all operating permits.

Condition 58, Permit Shield

Applicability Applies because the permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: The following table explains the permit shield requests and the department's applicability determination. The permit conditions sets forth the requirements that the department determined were not applicable to the facility, based on the permit application, past operating permit, construction permits and inspection reports.

The table below identifies application shield requests that were denied, and the reason they were denied.

Table F - Permit Shields Denied

SHIELD REQUESTED FOR:	REASON FOR SHIELD REQUEST:	REASON FOR REQUEST DENIAL:
Gas-Turbines		
40 CFR 60 Subpart GG for gas turbines: 42-P-2CT (Source ID 3)	Commenced construction prior to effective date of subpart (10/3/77). At the time of this application, turbines have not been modified or reconstructed, as defined in 40 CFR 60.14 or 60.15 respectively.	Until the EPA responds to the permittee's letter requesting clarification on whether the addition of 'Rim-Cooling' has constituted a modification, the department cannot grant a shield for this source.
Facility-Wide		
COBC provisions AQC Permit 9572-AA003 Conditions 1- 29 and Exhibits A -E	Permittee has complied with these provisions by complying with 18 AAC 50 and issued permits. Many permit conditions are not facility specific and have been superseded by newer rulings. Many conditions are redundant with the content of the construction permit exhibits.	Shields are not granted against COBC provisions. Permit shields may only be granted against requirements of AS 46.14, 18 AAC 50, or the Clean Air Act. (18 AAC 50.335(l)). Each facility-specific requirement established in a permit issued before Jan 17, 1997 must be included [18 AAC 50.350(d)(1)(D)]. Conditions included in this permit reflect the content of the previous construction permit and have been re-worded to reflect changes in regulation rulings. Conditions found in the previous construction permit have been re-worded to eliminate redundancy between the permit conditions and the permit exhibits.

Conditions 59 - 67, (Section 13)- Visible Emissions and PM Monitoring Plan

Applicability: This regulation applies to operation of all fuel-burning equipment in Alaska. Source ID(s) 1 - 7 are fuel-burning equipment.

Factual basis: These conditions have recently been adopted into regulation as a standard condition. MR&R requirements are listed in Section 13 of the permit.

Liquid Fired:

Monitoring – The visible emissions are to be observed by the Method-9 plan as detailed in Section 13. Corrective actions such as maintenance procedures and either more frequent or less frequent testing may be required depending on the results of the observations.

Recordkeeping – The permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting – The permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard, 2) and deviations from permit conditions. The permittee is required to include copies of the results of all visible emission observations with the facility operating report.

No visible emissions monitoring or particulate monitoring is required for insignificant sources.